

# OCERA THERAPEUTICS, INC.

## FORM 10-K (Annual Report)

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, D.C. 20549**

**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE TRANSITION PERIOD FROM \_\_\_ TO \_\_\_ .

Commission file number 001-35119



**OCERA THERAPEUTICS, INC.**

(Exact name of registrant as specified in its charter)

**DELAWARE**

(State or other jurisdiction of  
incorporation or organization)

**63-1192270**

(I.R.S. Employer  
Identification No.)

**525 University Avenue, Suite 610**

**Palo Alto, CA 94301**

(Address of principal executive offices including zip code)

**650-475-0158**

(Registrant's telephone number, including area code)

**Securities registered pursuant to Section 12(b) of the Act:**

<b>Title of each class</b>	<b>Name of each exchange on which registered</b>
Common Stock, \$0.00001 par value per share	NASDAQ Stock Market LLC

**Securities registered pursuant to Section 12(g) of the Act: None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.  .

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act (Check one):

Large accelerated Filer

Accelerated Filer

Non-accelerated Filer

Smaller Reporting Company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in 12b-2 of the Act). Yes  No

The aggregate market value of the common stock held by non-affiliates computed by reference to the last reported sale price on June 30, 2015 was approximately \$62.94 million. As of February 29, 2016, there were outstanding 21,307,129 shares of common stock.

**DOCUMENTS INCORPORATED BY REFERENCE:**

Certain information required by Part III of the Annual Report on Form 10-K is incorporated by reference from the registrant's definitive proxy statement for the registrant's 2016 annual meeting of stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the registrant's fiscal year ended December 31, 2015 .

**OCERA THERAPEUTICS, INC.**  
**ANNUAL REPORT ON FORM 10-K**  
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## CORPORATE INFORMATION AND FORWARD-LOOKING STATEMENTS

### Corporate Information

On July 15, 2013, Tranzyme, Inc., or Tranzyme, completed its merger, or the Merger, with Ocera Therapeutics, Inc., a privately held Delaware corporation, or Private Ocera, in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of April 23, 2013, or the Merger Agreement, by and among Tranzyme, Private Ocera and Terrapin Acquisition, Inc., a wholly-owned subsidiary of Tranzyme, or the Merger Subsidiary. Pursuant to the Merger Agreement, Merger Subsidiary merged with and into Private Ocera, with Private Ocera, renamed as Ocera Subsidiary, Inc., surviving the merger as a wholly-owned subsidiary of the combined company. Immediately following the Merger, the combined company changed its name from “Tranzyme, Inc.” to “Ocera Therapeutics, Inc.”

Unless otherwise stated in this Annual Report on Form 10-K (also referred to as this Annual Report or this Form 10-K) or the context otherwise requires, references to “Ocera,” “we,” “us,” “our,” the “Company” and similar references refer to Ocera Therapeutics, Inc. and its subsidiaries.

### Forward-Looking Statement Safe Harbor

This Annual Report on Form 10-K and the information incorporated herein by reference contain forward-looking statements that involve a number of risks, uncertainties and assumptions, including information with respect to our plans and strategy for our strategic process, product candidates, drug discovery platform and business. All statements that express expectations, estimates, forecasts or projections are forward-looking statements. Words such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “projects”, “forecasts”, “may”, “should”, and variations of such words and similar expressions are intended to identify such forward-looking statements. These statements include but are not limited to statements under the captions “Business”, “Risk Factors,” and “Management's Discussion and Analysis of Financial Condition and Results of Operations” as well as other sections in this Annual Report on Form 10-K. You should be aware that the occurrence of any of the events discussed under the heading “Item 1A. Risk Factors” and elsewhere in this report could substantially harm our business, results of operations and financial condition and that if any of these events occurs, the trading price of our common stock could decline and you could lose all or a part of the value of your shares of our common stock. The cautionary statements made in this report are intended to be applicable to all related forward-looking statements wherever they may appear in this Annual Report on Form 10-K. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. Except as required by law, we assume no obligation to update our forward-looking statements, even if new information becomes available in the future.

### Industry and Market Data

This Annual Report on Form 10-K includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by us and third parties. The industry in which we operate is subject to a high degree of uncertainty and risks due to various factors, including those described under the heading “Item 1A. Risk Factors”. These and other factors could cause results to differ materially from those expressed in the estimates made by us and third parties.

## Part I.

### Item 1. Business

#### Overview

We are a clinical-stage biopharmaceutical company focused on acute and chronic orphan liver diseases. Our initial focus is on the development and commercialization of a clinical candidate, OCR-002, for the treatment of hepatic encephalopathy, or HE. HE is a serious complication of liver cirrhosis, or liver failure, marked by mental changes including confusion, impaired motor skills, disorientation in time and space, and, in its more severe form, stupor, coma and even death. Although the exact cause of HE is not completely understood, there is growing evidence that elevated ammonia is a primary driver of HE, and that lowering ammonia may be beneficial to patients suffering from HE. Common causes of liver malfunction leading to elevated ammonia levels and HE include alcoholism, viral hepatitis and autoimmune diseases, non-alcoholic steatohepatitis, or NASH, as well as obesity, Type II diabetes, and acetaminophen overdose.

OCR-002 is a novel molecule, ornithine phenylacetate, which functions as an ammonia scavenger. In pre-clinical studies, OCR-002 significantly reduced arterial ammonia and cerebral edema in an animal model of chronic liver disease and significantly attenuated arterial ammonia, extracellular brain ammonia and intracranial pressure in a second animal model of acute liver failure.

We are currently conducting a randomized, placebo-controlled double blind Phase 2b clinical trial to evaluate the safety and efficacy of intravenous administration of OCR-002 in reducing the severity of HE symptoms among hospitalized HE patients. In March 2015, an independent data monitoring committee, or DMC, conducted an interim analysis, reporting that the trial was not futile and that there were no clinically significant safety issues of concern. In addition, the DMC recommended that we continue the trial and increase target enrollment from 140 patients to approximately 230 patients. This sample size recommendation allows the trial to maintain 80% statistical power to observe the treatment effect at the conclusion of the trial that was observed by the DMC at the time of the interim analysis. As of February 29, 2016, approximately 150 patients have been enrolled in total. We expect to complete enrollment in the fourth quarter of 2016.

We are also developing an oral form of OCR-002 with the goal of providing continuity of care for HE patients post discharge in order to prevent subsequent episodes of acute HE. In the fourth quarter of 2015, we completed a Phase 1 clinical trial with oral formulations of OCR-002 in healthy subjects. This open label, single-dose, five treatment, five-period crossover trial evaluated the pharmacokinetics, or PK, safety and tolerability of three prototype, extended-release oral formulations of OCR-002 compared to an immediate release oral solution of OCR-002 and the U.S. Food and Drug Administration, or FDA, approved ammonia-lowering agent, glycerol phenylbutyrate (RAVICTI®). Glycerol phenylbutyrate is a pre-pro-drug of phenylacetate, or PAA, a component of OCR-002. The results of this trial demonstrated a robust, extended-release pattern for all three pilot OCR-002 extended-release formulations, with mean plasma phenylacetate concentrations exceeding those achieved with RAVICTI® at all time points for at least 12 hours post-dose. In addition, the concentration of phenylacetylglutamine, or PAGN, the end-product responsible for clearing ammonia, was greater in both plasma and urine for all three OCR-002 extended-release dosage forms than RAVICTI® at an approximately equivalent molar PAA dose. Based on the strength of these results and the prior clinical proof of concept established with RAVICTI® in preventing recurrent HE in patients suffering from liver cirrhosis and a prior history of HE, we plan to continue development of oral OCR-002 and expect to conduct additional Phase 1 testing in the second half of 2016 after further formulation optimization.

In 2012, we completed a Phase 1 pharmacokinetic and safety clinical trial of the intravenous form of OCR-002. A Phase 2a investigator-sponsored trial in Spain evaluated OCR-002 in patients with upper gastrointestinal bleeding associated with liver cirrhosis. These patients tend to have elevated ammonia levels because they swallow blood, which produces more ammonia as it is digested. In the first part of this trial, a 10-patient open label safety cohort, OCR-002 was shown to lower ammonia when administered as a continuous intravenous infusion of up to 10 grams per 24 hours. In February 2015, we announced the preliminary topline results of the second part of this trial, which was a randomized, placebo-controlled cohort of 38 patients receiving either 10 grams per 24 hours of OCR-002 or placebo as a continuous intravenous infusion for five days. The data showed that over the first 12 hours of dosing, OCR-002 lowered ammonia by 19.6% compared to 3.2% in the placebo group, but this difference did not reach statistical significance. A statistically significant difference in urinary excretion of ammonia, as measured by PAGN, was observed and OCR-002 demonstrated a favorable safety profile and appeared to be well tolerated.

In addition, there is an investigator-sponsored Phase 2a clinical trial being conducted by the National Institutes of Health, or NIH, to evaluate the safety of OCR-002 in patients with hyperammonemia and HE due to acute liver failure or injury.

Our strategy is to focus clinical development activities on the intravenous form of OCR-002 to treat acute HE in hospitalized patients and on the oral form of OCR-002, which will be directed to chronic care of HE patients. Based on third

party analysis of Healthcare Cost and Utilization Project, or HCUP, and Medicare data, we estimate that there are approximately 120,000 patients with 180,000 hospitalizations for HE in the United States annually, and that this population is growing by about 5% per year. Additional third-party data from Centers for Medicare and Medicaid Services, or CMS, indicate that approximately 60% of patients suffering from HE are hospitalized for over five days. Utilizing this incidence data and a combination of third-party information and market research commissioned by us regarding pricing, we believe the combined annual market potential for intravenous and oral OCR-002 is approximately \$1.5 billion in the United States alone. If intravenous OCR-002 is able to reduce the duration of patient stays in hospital intensive care units, we believe it has an annual market potential of up to approximately \$600 million and if the oral formulation can reduce the frequency of acute HE episodes, we believe it has an annual market potential of up to approximately \$900 million.

OCR-002 has been granted orphan drug designation and Fast Track status by the FDA for the treatment of hyperammonemia and resultant HE in patients with acute liver failure and acute on chronic liver disease. Orphan drug designation is given to a drug candidate intended to treat a rare disease or condition that affects fewer than 200,000 individuals in the United States. OCR-002 has also been granted orphan drug designation in the European Union for the treatment of acute liver failure. Fast Track designation is available for certain new drug products if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast Track designation does not change the standards for approval but may expedite the development or approval process.

In December 2008, we licensed rights to OCR-002 from UCL Business PLC, an entity affiliated with University College London, or UCL, for the exclusive worldwide rights to develop and commercialize OCR-002 and related technologies for any use. The agreement was amended in July 2011, February 2013 and July 2015. As consideration for the license, we paid an up-front fee of \$1.0 million. We may be required to make future milestone payments to UCL totaling up to \$20.0 million upon the achievement of various milestones related to clinical and regulatory events for OCR-002. We may also be required to pay milestone payments totaling up to \$35.0 million upon the achievement of various milestones related to future net sales of OCR-002. We are also obligated to pay tiered royalties in the low to mid-single digits on future net sales of the licensed product candidate.

We are building intellectual property protection of OCR-002. We have exclusively licensed from UCL one patent and one patent application in the United States, and nineteen patents and three pending patent applications in foreign jurisdictions (including granted patents in Europe, Japan, China and several other countries), related to OCR-002 composition-of-matter or use in the treatment of HE, all of which expire in 2025. In addition, we exclusively own four patents and one pending patent application in the United States, and seven patents and sixteen pending patent applications in foreign jurisdictions (including a granted patent in China), that include specific drug substance patent claims, all of which expire in 2030. We also co-own with UCL and have exclusively licensed from UCL one pending application in the United States, and ten patents and twelve pending applications in foreign jurisdictions (including granted patents in Europe, Japan, China and several other countries), that include claims related to the use of OCR-002 for the treatment of portal hypertension, all of which expire in 2030. We also hold exclusive rights to two patents in the United States, and three patents and twelve pending applications in foreign jurisdictions, for the manufacture of OCR-002, all of which expire in 2031.

We are developing OCR-002 and retain global rights to commercialization for both the intravenous and oral forms of the drug. We may seek partners to help us develop OCR-002, including the potential to partner product commercialization rights.

### **Hepatic Encephalopathy: A Neurocognitive Disorder Related to Elevated Ammonia Levels**

HE is a serious neurological disorder that can occur in patients with advanced cirrhosis or acute liver failure. HE is believed to occur when the brain is exposed to gut-derived toxins normally removed by the healthy liver. While a variety of these toxins may contribute to HE, it is generally believed that ammonia plays a causal role in the disorder. A third-party study published in *Hepatology* in 2007 showed that higher ammonia levels correlated with greater frequency of HE and elevated intracranial pressure. Additionally, an independent study published in the *American Journal of Medicine* in 2003 showed that ammonia measurements correlated with the severity of HE in patients. Further evidence of ammonia's central role in HE is obtained from a paper published in *Hepatology* in 2013 that showed administration of an ammonia scavenger reduced HE events, as well as ammonia, in patients with known cirrhosis and who had experienced two or more HE events in the six months prior to the study. The diagnosis of HE requires the presence of impaired liver function and the exclusion of an alternative explanation for the symptoms. Blood tests of ammonia levels may assist in the diagnosis.

Currently, lactulose is the only FDA-approved treatment for patients presenting at the hospital with acute HE. Lactulose is a laxative which helps to eliminate ammonia through the gut. In addition to lactulose, the current standard of care for these patients includes hydration, supportive care and potential off-label use of pharmacologic treatment to suppress the production of ammonia by intestinal bacteria, most commonly through administration of non-absorbable antibiotics. There is inconsistent data on the degree of effectiveness of these agents in treating the acute HE patient.

Based on third party analysis of HCUP data, we estimate that there are approximately 120,000 patients with 180,000 hospitalizations for HE in the United States annually, and that this population is growing by about 5% a year. Additional third-party data from CMS indicates that approximately 60% of patients suffering from HE are hospitalized for over five days.

Acute HE is believed to be caused by the rapid accumulation of ammonia in the blood in patients with a failing liver. As the ammonia crosses the blood brain barrier, it may lead to brain swelling and serious neurocognitive deficit. These patients are generally very sick, and may be stuporous or comatose, and unable to swallow and effectively absorb oral medications. Therefore, we believe it is preferable to treat them with an intravenous, easily administrable agent that can act rapidly and safely. We believe that OCR-002 may be beneficial in managing these patients.

### **OCR-002 Mechanism of Action**

OCR-002, which contains ornithine and phenylacetate, appears to have a dual mechanism of action designed to lower ammonia without involvement of the liver, which is damaged or diseased in HE patients. A preliminary human study conducted by Professor Rajiv Jalan, MD, of UCL, suggested that co-administration of ornithine (delivered as L-ornithine L-aspartate) and phenylacetate (delivered as phenylbutyrate) lowered ammonia levels more than either alone. It is generally believed that ornithine promotes ammonia clearance through the urea cycle and via muscle tissue. Ornithine enters the muscle where it is converted to glutamate, which in turn combines with ammonia to create glutamine. Glutamine combines with phenylacetate to form PAGN which is then excreted through the kidneys.

### **Clinical Development Programs**

#### OCR-002 IV Formulation

##### ***Phase 2 Trials***

##### ***"Stop HE" Phase 2b Trial***

We are currently conducting a randomized, placebo-controlled double blind Phase 2b clinical trial in approximately 230 patients to evaluate the safety and efficacy of intravenously administered OCR-002 in reducing the severity of HE symptoms among hospitalized HE patients. We commenced this trial in the fourth quarter of 2013 and enrolled our first patient in January 2014. The trial is currently being conducted at approximately 90 sites worldwide. To increase the pace of enrollment, we amended our trial protocol in March 2014 to broaden the eligible patient selection criteria. In April 2014, we further amended the protocol to increase patient dosage to up to 20 grams per day based on our review of preliminary pharmacokinetic data from our investigator-sponsored trials discussed below. This increased dosage level remains below the maximum tolerated dose of 40 grams per day observed in our Phase 1 trial. In October 2014, we further amended the protocol to broaden enrollment and clarify certain operational aspects of the trial. The primary efficacy endpoint of this trial is time to clinically meaningful improvement in HE symptoms. Secondary endpoints include time to complete resolution, proportion of clinical responders, length of hospital stay and time in the intensive care unit, among others. As of February 29, 2016, approximately 150 patients have been enrolled in the trial and we expect to complete enrollment in the fourth quarter of 2016.

##### ***Investigator Sponsored Phase 2a Trials***

In February 2015, we announced the preliminary topline results of the second phase of a Phase 2a investigator-sponsored, double-blind placebo controlled trial of OCR-002 in 38 patients with upper gastrointestinal bleeding associated with liver cirrhosis, receiving either 10 grams per 24 hours of OCR-002 or placebo as a continuous intravenous infusion for five days. This trial showed that OCR-002 lowered ammonia by 19.6% over the first 12 hours, compared to 3.2% over the first 12 hours in the placebo group, but this difference did not reach statistical significance. A statistically significant difference in urinary excretion of ammonia, as measured by PAGN, the key ammonia elimination pathway for OCR-002, was observed. OCR-002 demonstrated a favorable safety profile and appeared to be well tolerated. The first phase of this trial was conducted on an open label basis and the investigators observed a rapid decline in ammonia in the 10 patients who received OCR-002 at up to 10 grams per day in addition to the standard of care.

In addition, there is a second investigator-sponsored Phase 2a trial of OCR-002 underway. This trial, sponsored by NIH, is a pilot open label dose ranging trial of up to 10 grams per day, assessing safety and pharmacokinetics of OCR-002 in patients with acute liver failure/injury and hyperammonemia. In the NIH trial, there have been 28 evaluable patients enrolled with no drug-related serious adverse events.

##### ***Phase 1 Pharmacokinetic Trial - Intravenous Formulation***

We completed Phase 1 pharmacokinetic and safety trials of intravenous OCR-002 in a parallel ascending dose clinical trial of 48 healthy volunteers and 43 stable cirrhotic patients. No serious adverse events, deaths or discontinuations were

reported. The most common dose-related toxicities included dizziness, headache, nausea and blurred vision. Through this trial, we established the pharmacokinetic profile of OCR-002 and identified safety margins.

### ***Pre-clinical Studies***

Pre-clinical studies of OCR-002 were performed in two animal models, rat with bile duct ligation as a model for chronic liver disease and pig with hepatic artery ligation as a model for acute liver failure. In the rat model, OCR-002 significantly reduced arterial ammonia and cerebral edema, and in the pig model, OCR-002 significantly attenuated arterial ammonia, extracellular brain ammonia and intracranial pressure.

### **OCR-002 Oral Formulation**

#### ***Phase 1 Pharmacokinetic Trial - Oral Prototype Formulations***

In the fourth quarter of 2015, we completed a Phase 1 clinical trial with oral prototype formulations of OCR-002 in healthy subjects. This open label, single-dose, five treatment, five-period crossover trial evaluated the PK, safety and tolerability of three prototype, extended-release oral formulations of OCR-002 compared to an immediate release oral solution of OCR-002 and the ammonia-lowering agent, glycerol phenylbutyrate (RAVICTI®), a pre-pro-drug of PAA, a component of OCR-002.

The results of this trial demonstrated a robust, extended-release pattern for all three pilot OCR-002 extended-release formulations, with mean plasma phenylacetate concentrations exceeding those achieved with RAVICTI® at all time points. The mean maximum concentration, or C<sub>max</sub>, of plasma PAA from the three pilot OCR-002 extended-release formulations ranged from approximately 50 to 90 µg/mL occurring at various time points over four to nine hours after dosing. For comparison, RAVICTI® produced a mean plasma PAA C<sub>max</sub> of approximately 10 µg/mL at four to six hours after dosing.

In addition, plasma and urinary PAGN concentrations were greater for all three OCR-002 extended-release dosage forms than with RAVICTI®. The mean C<sub>max</sub> of plasma PAGN from the pilot extended-release formulations of OCR-002 ranged from approximately 30 to 45 µg/mL occurring at various time points over four to ten hours after dosing. For comparison, RAVICTI® produced a mean plasma PAGN C<sub>max</sub> of about 20 to 25 µg/mL at approximately five hours.

Based on the strength of these results and the prior clinical proof of concept established with RAVICTI® in preventing recurrent HE in patients suffering from liver cirrhosis and a prior history of HE, we plan to continue development of oral OCR-002 and expect to conduct additional Phase 1 testing in the second half 2016 after further formulation optimization.

### ***Pre-clinical Studies***

Pre-clinical studies of oral formulations of OCR-002 were conducted in both in vitro and in vivo models. As these oral formulations of OCR-002 contain the same active ingredient as our intravenous formulation of OCR-002, we did not base our testing on measures of reducing ammonia. Rather, our focus was to identify an appropriate pharmacokinetic profile that would support a convenient dosing schedule.

### **Manufacturing**

We currently have no manufacturing facilities. We rely on third-party manufacturers to produce bulk drug substance and drug products required for commercial use and for our clinical trials.

We have had clinical supplies of OCR-002 drug substance manufactured for us by Helsinn Chemicals SA in Switzerland. Finished product manufacturing and filling for OCR-002 IV clinical supplies has been undertaken by AAI Pharma Service Corp in North Carolina. We rely on additional third-parties for manufacturing our research stage oral formulation prototypes. Our third-party manufacturers, their facilities and all lots of drug substance and drug products are required to be in compliance with current Good Manufacturing Practices, or cGMP. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports, and returned or salvaged products. The manufacturing facilities for our products must meet cGMP requirements and FDA satisfaction before any product is approved for the US market and before we can manufacture commercial products. Our third-party manufacturers are also subject to periodic inspections of facilities by the FDA and other authorities, including procedures and operations used in the testing and manufacture of our products to assess our compliance with applicable regulations. Failure to comply with statutory and regulatory requirements subjects a manufacturer to possible legal or regulatory action, including warning letters, the seizure or recall of products, injunctions, consent decrees placing significant restrictions on or suspending manufacturing operations and civil and criminal penalties. These actions could have a material impact on the availability of our products. Contract manufacturers may encounter difficulties involving production yields, quality control and quality assurance, as well as shortages of qualified personnel.

## Competition

We face competition from established pharmaceutical and biotechnology companies, as well as from academic institutions, government agencies and private and public research institutions, among others, which may in the future develop products to treat HE. Our commercial opportunity may be reduced significantly if our competitors develop and commercialize products that are safer, more effective, more convenient, have fewer side effects or are less expensive than OCR-002. Public announcements regarding the development of competing drugs could adversely affect the commercial potential of OCR-002.

Currently there is no cure for HE other than liver transplantation, which is limited by donor availability and patient eligibility. For treatment of acute HE, the standard of care is treatment with hydration and lactulose. For prevention of recurring HE, lactulose and rifaximin are the only FDA-approved therapies for reduction in risk of episodic HE recurrence. To be commercially viable in the treatment of acute HE, we must demonstrate that OCR-002 shortens the time to meaningful clinical improvement, and to be viable in the chronic treatment of HE, OCR-002 must be deliverable in a practical and competitive dosage form as well as offering sufficient efficacy and tolerability. If a curative treatment for HE is developed other than liver transplantation, OCR-002 may become obsolete for that indication.

## Intellectual Property

We are seeking patent protection in the United States and internationally for our products and product candidates. Our policy is to pursue, maintain and defend patent rights developed internally and by our licensor UCL to protect the technology, inventions and improvements that are commercially important to the development of our business. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of the existing patents upon which our product candidates rely or any patents granted to us in the future will be commercially useful in protecting our technology. We also rely on trade secrets to protect our product candidates. Our commercial success also depends in part on our non-infringement of the patents or proprietary rights of third parties. For a more comprehensive discussion of the risks related to our intellectual property, please see “Risk Factors - Risks Related to Our Intellectual Property.”

Our success depends in part on our ability to:

- obtain and maintain proprietary and marketing exclusivity rights for OCR-002;
- preserve trade secrets;
- prevent third parties from infringing upon the proprietary rights; and
- operate our business without infringing the patents and proprietary rights of third parties, both in the United States and internationally.

We are building intellectual property protection of OCR-002. We have exclusively licensed from UCL one patent and one patent application in the United States, and nineteen patents and three pending patent applications in foreign jurisdictions (including granted patents in Europe, Japan, China and several other countries), related to OCR-002 composition-of-matter or use in the treatment of HE, all of which expire in 2025. In addition, we exclusively own four patents and one pending patent application in the United States, and seven patents and sixteen pending patent applications in foreign jurisdictions (including a granted patent in China), that include specific drug substance patent claims, all of which expire in 2030. We also co-own with UCL and have exclusively licensed from UCL one pending application in the United States, and ten patents and twelve pending applications in foreign jurisdictions (including granted patents in Europe, Japan, China and several other countries), that include claims related to the use of OCR-002 for the treatment of portal hypertension, all of which expire in 2030. We also hold exclusive rights to two patents in the United States, and three patents and twelve pending applications in foreign jurisdictions, for the manufacture of OCR-002, all of which expire in 2031. In addition, we have multiple pending provisional applications directed to formulations and additional uses. However, there is a significant risk that the pending applications will not issue as patents, or that they may issue with substantially narrower claims than those that are currently sought.

We also protect our proprietary technology and processes, in part, by confidentiality and invention assignment agreements with our employees, consultants, scientific advisors and other contractors. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our employees, consultants, scientific advisors or other contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

The U.S. patent system permits the filing of provisional and non-provisional patent applications. A non-provisional patent application is examined by the U.S. Patent and Trademark Office, or USPTO, and can mature into a patent once the USPTO determines that the claimed invention meets the standards for patentability. A provisional patent application is not examined for patentability, and automatically expires 12 months after its filing date. As a result, a provisional patent

application cannot mature into a patent. The requirements for filing a provisional patent application are not as strict as those for filing a non-provisional patent application. Provisional applications are often used, among other things, to establish an earlier filing date for a subsequent non-provisional patent application. The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment or PTA, which compensates a patentee for administrative delays by the USPTO in granting a patent. In view of a recent court decision, the USPTO is under greater scrutiny regarding its calculations where the USPTO erred in calculating the patent term adjustment for the patents in question denying the patentee a portion of the patent term to which it was entitled. Alternatively, a patent's term may be shortened if a patent is terminally disclaimed over another patent.

The effective filing date of a non-provisional patent application is used by the USPTO to determine what information is prior art when it considers the patentability of a claimed invention. If certain requirements are satisfied, a non-provisional patent application can claim the benefit of the filing date of an earlier filed provisional patent application. As a result, the filing date accorded by the provisional patent application may supersede information that otherwise could preclude the patentability of an invention.

The term of a patent that covers an FDA-approved drug may also be eligible for patent term extension, or PTE, which permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, permits a PTE of up to five years beyond the expiration of the patent. The length of the PTE is related to the length of time the drug is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when OCR-002 or any future product candidates we may develop receive FDA or other regulatory approval, we expect to apply for PTEs on patents covering those products. Depending upon the timing, duration and specifics of FDA approval of OCR-002 or any future product candidates we may develop, one or more of our U.S. patents may be eligible for limited patent term restoration.

### **Regulatory Matters**

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act and related regulations. Drugs are also subject to other federal, state and local statutes and regulations. Failure to comply with the applicable United States regulatory requirements at any time during the product development process, approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the imposition by the FDA or an Institutional Review Board, or IRB, of a clinical hold on trials, the FDA's refusal to approve pending applications or supplements, withdrawal of an approval, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal prosecution. Any agency or judicial enforcement action could have a material adverse effect on us.

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture and marketing of pharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, distribution, record keeping, approval, advertising and promotion of our products.

The FDA's policies may change and additional government regulations may be enacted that could prevent or delay regulatory approval of OCR-002 or any future product candidates or approval of new disease indications or label changes. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might arise from future legislative or administrative action, either in the United States or abroad.

### ***Marketing Approval***

The process required by the FDA before drugs may be marketed in the United States generally involves the following:

- nonclinical laboratory and animal tests;
- submission of an Investigational New Drug, or IND, application which must become effective before clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug for its intended use or uses;
- pre-approval inspection of manufacturing facilities and clinical trial sites; and
- FDA approval of a New Drug Application, or NDA, which must occur before a drug can be marketed or sold.

The testing and approval process requires substantial time and financial resources, and we cannot be certain that any new approvals for our product candidates will be granted on a timely basis if at all.

Our planned clinical trials for our product candidates may not begin or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays in:

- obtaining regulatory approval to commence a trial;
- reaching agreement with third-party clinical trial sites and their subsequent performance in conducting accurate and reliable studies on a timely basis;
- obtaining IRB approval to conduct a trial at a prospective site;
- nonclinical laboratory and animal tests;
- recruiting patients to participate in a trial; and
- supply of the drug.

Prior to commencing the first clinical trial, an initial IND application must be submitted to the FDA. The IND application automatically becomes effective 30 days after receipt by the FDA unless the FDA within the 30-day time period raises concerns or questions about the conduct of the clinical trial. In such case, the IND application sponsor must resolve any outstanding concerns with the FDA before the clinical trial may begin. A separate submission to the existing IND application must be made for each successive clinical trial to be conducted during product development. Further, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial before it commences at that site. Informed consent must also be obtained from each trial subject. Regulatory authorities, an IRB or the sponsor, may suspend or terminate a clinical trial at any time on various grounds, including a finding that the participants are being exposed to an unacceptable health risk.

For purposes of NDA approval, human clinical trials are typically conducted in phases that may overlap:

- Phase 1 - the drug is initially given to healthy human subjects or patients and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. These studies may also gain early evidence on effectiveness. During Phase 1 clinical trials, sufficient information about the investigational drug's pharmacokinetics and pharmacologic effects may be obtained to permit the design of well-controlled and scientifically valid Phase 2 clinical trials.
- Phase 2 - studies are conducted in a limited number of patients in the target population to identify possible adverse effects and safety risks, to determine the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3 - when Phase 2 evaluations demonstrate that a dosage range of the product appears effective and has an acceptable safety profile, and provide sufficient information for the design of Phase 3 studies, Phase 3 trials are undertaken to provide statistically significant evidence of clinical efficacy and to further test for safety in an expanded patient population at multiple clinical trial sites. They are performed after preliminary evidence suggesting effectiveness of the drug has been obtained, and are intended to further evaluate dosage, effectiveness and safety, to establish the overall benefit-risk relationship of the investigational drug, and to provide an adequate basis for product approval by the FDA.
- Phase 4 - post-marketing studies, or Phase 4 clinical trials, may be conducted after initial marketing approval. These studies may be required by the FDA as a condition of approval and are used to gain additional experience from the treatment of patients in the intended therapeutic indication. The FDA also now has express statutory authority to require post-market clinical studies to address safety issues.

All of these trials must be conducted in accordance with good clinical practice requirements in order for the data to be considered reliable for regulatory purposes.

Government regulation may delay or prevent marketing of product candidates or new drugs for a considerable period of time and impose costly procedures upon our activities. We cannot be certain that the FDA or any other regulatory agency will grant approvals for any future product candidates on a timely basis, if at all. Success in early stage clinical trials does not ensure success in later stage clinical trials. Data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval.

### ***The NDA Approval Process***

In order to obtain approval to market a drug in the United States, a marketing application must be submitted to the FDA that provides data establishing to the FDA's satisfaction the safety and effectiveness of the investigational drug for the proposed indication. Each NDA submission requires a substantial user fee payment unless a waiver or exemption applies. The application includes all relevant data available from pertinent nonclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry,

manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators.

The FDA will initially review the NDA for completeness before it accepts it for filing. The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that the application is sufficiently complete to permit substantive review. After the NDA submission is accepted for filing, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA may refer applications for novel drug products or drug products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and, if so, under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Based on pivotal Phase 3 trial results submitted in an NDA, upon the request of an applicant, the FDA may grant a priority review designation to a product, which sets the target date for FDA action on the application at six months, rather than the standard ten months. Priority review is given where preliminary estimates indicate that a product, if approved, has the potential to provide a significant improvement compared to marketed products or offers a therapy where no satisfactory alternative therapy exists. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

After the FDA completes its initial review of an NDA, it will communicate to the sponsor that the drug will either be approved, or it will issue a complete response letter to communicate that the NDA will not be approved in its current form and inform the sponsor of changes that must be made or additional clinical, nonclinical or manufacturing data that must be received before the application can be approved, with no implication regarding the ultimate approvability of the application.

Before approving an NDA, the FDA may inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA may inspect one or more clinical sites to assure compliance with GCP. If the FDA determines the application, manufacturing process or manufacturing facilities are not acceptable, it typically will outline the deficiencies and often will request additional testing or information. This may significantly delay further review of the application. If the FDA finds that a clinical site did not conduct the clinical trial in accordance with GCP, the FDA may determine the data generated by the clinical site should be excluded from the primary efficacy analyses provided in the NDA. Additionally, notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process for a drug requires substantial time, effort and financial resources and this process may take several years to complete. Data obtained from clinical activities are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The FDA may not grant approval on a timely basis, or at all. We may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing our products.

The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied for continuing drug approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information. In addition, the FDA has express statutory authority to require sponsors to conduct post-market studies to specifically address safety issues identified by the agency.

Even if a product candidate receives regulatory approval, the approval may be limited to specific disease states, patient populations and dosages, or might contain significant limitations on use in the form of warnings, precautions or contraindications, or in the form of onerous risk management plans, restrictions on distribution, or post-marketing trial requirements. Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

#### ***FDA Post-Approval Requirements***

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including requirements for record-keeping and reporting of adverse experiences with the drug. Drug manufacturers are required to register their facilities with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain quality

processes, manufacturing controls and documentation requirements upon us and our third-party manufacturers in order to ensure that the product is safe, has the identity and strength, and meets the quality and purity characteristics that it purports to have. Certain states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP and other FDA regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may halt our clinical trials, fail to approve any NDA or other application, require us to recall a drug from distribution, shut down manufacturing operations or withdraw approval of the NDA for that drug. Noncompliance with cGMP or other requirements can result in issuance of warning letters, civil and criminal penalties, seizures and injunctive action.

### ***Labeling, Marketing and Promotion***

The FDA closely regulates the labeling, marketing and promotion of drugs. While doctors are free to prescribe any drug approved by the FDA for any use, a company can only make claims relating to safety and efficacy of a drug that are consistent with FDA approval, and the company is allowed to actively market a drug only for the particular use and treatment approved by the FDA. In addition, any claims we make for our products in advertising or promotion must be appropriately balanced with important safety information and otherwise be adequately substantiated. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising, injunctions and potential civil and criminal penalties. Government regulators recently have increased their scrutiny of the promotion and marketing of drugs.

### ***Orphan Designation and Fast Track Status***

OCR-002 received orphan designation for the treatment of hyperammonemia and resultant HE in patients with acute liver failure or acute-on-chronic liver disease. Under the Orphan Drug Act, the FDA may grant orphan designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States. Orphan designation must be requested before submitting an NDA. Generally, if a drug that receives orphan designation is approved for the orphan indication, it receives orphan drug exclusivity, which for seven years prohibits the FDA from approving another product with the same active chemical entity for the same indication. Orphan exclusivity will not bar approval of another product under certain circumstances, including if the new drug is shown to be clinically superior to the approved product on the basis of greater efficacy or safety, or provides a major contribution to patient care. After the FDA grants orphan designation, the identity of the applicant, as well as the name of the therapeutic agent and its designated orphan use, are disclosed publicly by the FDA.

Orphan designation for OCR-002 for HE was granted based on data demonstrating that this disease affects fewer than 200,000 patients in the United States.

Orphan designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. If a product that has orphan designation is the first such product to receive FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that subsequent to approval the FDA may not approve any other applications to market a drug with the same active moiety for the same disease, except in limited circumstances, for seven years. During orphan exclusivity, the FDA may only permit additional companies to market a drug with the same active chemical entity for the designated condition if such companies can demonstrate substantial improvement, or if the company with the orphan drug exclusivity is not able to meet market demand. More than one product may also be approved by the FDA for the same orphan indication or disease as long as the products contain different active ingredients. As a result, even though OCR-002 has received orphan exclusivity, the FDA can still approve other drugs that have a different active chemical entity for use in treating the same indication or disease covered by OCR-002, which could create a more competitive market for us.

OCR-002 has also received Fast Track status from the FDA. Fast Track is a process designed to facilitate the development and expedite the review of drugs to treat serious conditions and fill an unmet medical need. The purpose is to get important new drugs to the patient earlier.

### ***Anti-Kickback and False Claims Laws***

In the United States, in addition to the FDA, the research, manufacturing, distribution, sale and promotion of drug products and medical devices are potentially subject to regulation by various federal, state and local authorities, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state Attorneys General, and other state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with the Medicare-Medicaid Anti-Fraud and Abuse Act, as amended, or the Anti-Kickback Statute, the False Claims Act, as amended, the privacy regulations promulgated under the Health Insurance Portability and Accountability Act, or HIPAA, and similar state laws. Pricing and rebate programs must comply with the Medicaid Drug Rebate Program requirements of

the Omnibus Budget Reconciliation Act of 1990, as amended, and the Veterans Health Care Act of 1992, as amended. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

As noted above, in the United States, we are subject to complex laws and regulations pertaining to healthcare “fraud and abuse,” including, but not limited to, the Anti-Kickback Statute, the federal False Claims Act, and other state and federal laws and regulations. The Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully solicit, receive, offer, or pay any remuneration that is intended to induce the referral of business, including the purchase, order, or prescription of a particular drug, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties, and exclusion from participation in federal healthcare programs. In addition, many states have adopted laws similar to the Anti-Kickback Statute. Some of these state prohibitions apply to the referral of patients for healthcare services reimbursed by any insurer, not just federal healthcare programs such as Medicare and Medicaid. Due to the breadth of these federal and state anti-kickback laws, the absence of guidance in the form of regulations or court decisions, and the potential for additional legal or regulatory change in this area, it is possible that our future sales and marketing practices and/or our future relationships with physicians might be challenged under anti-kickback laws, which could harm us. Because we intend to commercialize products that could be reimbursed under a federal healthcare program and other governmental healthcare programs, we plan to develop a comprehensive compliance program that establishes internal controls to facilitate adherence to the rules and program requirements to which we will or may become subject.

The federal False Claims Act prohibits anyone from knowingly presenting, or causing to be presented, for payment to federal programs (including Medicare and Medicaid) claims for items or services, including drugs, that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. Although we would not submit claims directly to payors, manufacturers can be held liable under these laws if they are deemed to “cause” the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers or promoting a product off-label. In addition, our future activities relating to the reporting of wholesaler or estimated retail prices for our products, the reporting of prices used to calculate Medicaid rebate information and other information affecting federal, state, and third-party reimbursement for our products, and the sale and marketing of our products, are subject to scrutiny under this law. For example, pharmaceutical companies have been prosecuted under the federal False Claims Act in connection with their off-label promotion of drugs. Penalties for a False Claims Act violation include three times the actual damages sustained by the government, plus mandatory civil penalties of between \$5,500 and \$11,000 for each separate false claim, the potential for exclusion from participation in federal healthcare programs, and, although the federal False Claims Act is a civil statute, conduct that results in a False Claims Act violation may also implicate various federal criminal statutes. If the government were to allege that we were, or convict us of, violating these false claims laws, we could be subject to a substantial fine and may suffer a decline in our stock price. In addition, private individuals have the ability to bring actions under the federal False Claims Act and certain states have enacted laws modeled after the federal False Claims Act.

There are also an increasing number of state laws that require manufacturers to make reports to states on pricing and marketing information. Many of these laws contain ambiguities as to what is required to comply with the laws. In addition, as discussed below, a similar federal requirement has required manufacturers to track and report to the federal government certain payments made to physicians and teaching hospitals made in the previous calendar year. These laws may affect our sales, marketing, and other promotional activities by imposing administrative and compliance burdens on us. In addition, given the lack of clarity with respect to these laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent state and federal authorities.

#### ***Patient Protection and Affordable Care Act***

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, collectively, the PPACA, was enacted, which includes measures that have or will significantly change the way health care is financed by both governmental and private insurers. Among the provisions of PPACA of greatest importance to the pharmaceutical industry are the following:

- The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services a condition for states to receive federal matching funds for the manufacturer’s outpatient drugs furnished to Medicaid patients. Effective in 2010, PPACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers’ rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs and biologic agents from 15.1% of average manufacturer price, or AMP, to 23.1% of AMP and

adding a new rebate calculation for “line extensions” (i.e., new formulations, such as extended-release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. PPACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization as of 2010 and by expanding the population potentially eligible for Medicaid drug benefit. The Centers for Medicare and Medicaid Services, or CMS, have proposed to expand Medicaid rebate liability to the territories of the United States as well. In addition, PPACA provides for the public availability of retail survey prices and certain weighted average AMPs under the Medicaid program. The implementation of this requirement by CMS may also provide for the public availability of pharmacy acquisition of cost data, which could negatively impact our sales.

- In order for a pharmaceutical product to receive federal reimbursement under the Medicare Part B and Medicaid programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer. Effective in 2010, PPACA expanded the types of entities eligible to receive discounted 340B pricing, although, under the current state of the law, with the exception of children’s hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs when used for the orphan indication. In addition, as 340B drug pricing is determined based on AMP and Medicaid rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discount to increase.
- PPACA imposed a requirement on manufacturers of branded drugs and biologic agents to provide a 50% discount off the negotiated price of branded drugs dispensed to Medicare Part D patients in the coverage gap.
- PPACA imposed an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs, although this fee would not apply to sales of certain products approved exclusively for orphan indications.
- PPACA will require pharmaceutical manufacturers to track certain financial arrangements with physicians and teaching hospitals, including any “transfer of value” made or distributed to such entities, as well as any investment interests held by physicians and their immediate family members. Manufacturers of products reimbursable by federal healthcare programs are required to report this information to CMS annually.
- A new Patient-Centered Outcomes Research Institute was established pursuant to PPACA to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research. The research conducted by the Patient-Centered Outcomes Research Institute may affect the market for certain pharmaceutical products.
- PPACA authorized the creation of the Independent Payment Advisory Board with the authority to recommend certain changes to the Medicare program to reduce expenditures by the program that could result in reduced payments for prescription drugs.
- PPACA established the Center for Medicare and Medicaid Innovation within CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending. Funding has been allocated to support the mission of the Center for Medicare and Medicaid Innovation from 2011 to 2019.

Many of the details regarding the implementation of PPACA are yet to be determined, and at this time, it remains unclear the full effect that PPACA would have on our business.

#### ***Other Regulations***

We are also subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control, and disposal of hazardous or potentially hazardous substances. We may incur significant costs to comply with such laws and regulations now or in the future.

#### **Research and Development**

We devote a substantial portion of our resources to developing new product candidates. During the years ended December 31, 2015, 2014 and 2013, we expended approximately \$ 16.0 million , \$14.9 million and \$3.5 million , respectively, on research and development activities.

## Employees

We had 20 full-time employees as of December 31, 2015. None of our employees are represented by any collective bargaining unit. We believe that we maintain good relations with our employees.

## Corporate and Available Information

Our principal corporate offices are located at 525 University Avenue, Suite 610, Palo Alto, CA 94301 and our telephone number is (650) 475-0158. We were incorporated in Delaware in 2004. Our internet address is [www.ocerainc.com](http://www.ocerainc.com). We make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or the SEC. Our SEC reports can be accessed through the Investors section of our website. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D. C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements and other information regarding our filings at <http://www.sec.gov>. The information found on our website is not incorporated by reference into this Annual Report on Form 10-K or any other report we file with or furnish to the SEC.

## Item 1A. Risk Factors

*You should consider carefully the following information about the risks described below, together with the other information contained in this Annual Report on Form 10-K and in our other public filings in evaluating our business. If any of the following risks actually occurs, our business, financial condition, results of operations and future prospects would likely be materially and adversely affected. In these circumstances, the market price of our common stock would likely decline.*

### **Risks Related to Our Business and the Development, Regulatory Approval and Commercialization of our Product Candidates**

*We depend substantially on the success of our product candidate, OCR-002, and we may not successfully complete the development of OCR-002, obtain regulatory approval or successfully commercialize the product candidate.*

Our business is substantially dependent on our ability to complete the development of, obtain regulatory approval for, and successfully commercialize an intravenous formulation of OCR-002 for the treatment of hyperammonemia and associated hepatic encephalopathy, or HE, in patients with liver cirrhosis, acute liver failure and acute liver injury as well as an oral formulation of OCR-002 to provide a chronic use option to maintain remission of HE in patients with liver cirrhosis. The process to develop, obtain regulatory approval for and commercialize OCR-002 is long, complex and costly.

We have not submitted a new drug application, or NDA, or received regulatory approval to market for OCR-002 in any jurisdiction. We have only limited experience in filing the applications necessary to gain regulatory approvals and expect to rely on consultants and third party contract research organizations to assist us in this process. Securing approval by the U.S. Food and Drug Administration, or FDA, requires the submission of extensive pre-clinical and clinical data, information about product manufacturing processes and inspection of facilities and supporting information to the FDA for each therapeutic indication to establish a product candidate's safety and efficacy. OCR-002 and any future product candidates we may develop, may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

OCR-002 and the activities associated with its development and commercialization, including testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. We are not permitted to market OCR-002 or any future product candidates we may develop in the United States until we receive approval of an NDA for the product candidate in a particular indication from the FDA. Failure to obtain regulatory marketing approval for a product candidate will prevent us from commercializing the product candidate, and our ability to generate revenue will be materially impaired.

The process of obtaining necessary regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon, among other things, the type, complexity and novelty of the product candidates involved. Changes in the regulatory approval policy during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for a submitted product application, may cause delays in

the approval or rejection of an application. Regulatory approval obtained in one jurisdiction does not necessarily mean that a product candidate will receive regulatory approval in all jurisdictions in which we may seek approval.

The FDA, European Medicine Agency, or EMA, and other regulators have substantial discretion in the approval process and may form an opinion, after review of our data, that any NDA we may file with the FDA is insufficient to allow approval of OCR-002 for any of the indications we are pursuing. The FDA may require that we conduct additional clinical, nonclinical, manufacturing validation or drug product quality studies and submit data from these studies before it will consider or reconsider any NDA we may file. Depending on the extent of these or any other studies, approval of any applications that we submit may be delayed, or may require us to expend more resources than we have available. It is also possible that additional studies, if performed and completed, may not be considered sufficient by the FDA to approve the use of intravenous OCR-002 for either HE or acute liver failure or oral OCR-002 for the chronic care of HE patients. If any of these outcomes occur, we may not receive regulatory approval for OCR-002. Even if we obtain FDA approval for OCR-002, the approval might contain significant limitations related to use restrictions for certain age groups, warnings, precautions or contraindications, or may be subject to significant post-marketing studies or risk mitigation requirements. If we are unable to successfully commercialize OCR-002, we may not be able to earn sufficient revenues to continue our business.

***Any safety or efficacy concerns, including our ability to show a statistically significant reduction in the clinical severity of HE, or delays in enrollment, in our Phase 2b clinical trial, and any future Phase 3 clinical trials we may conduct, could delay or prevent regulatory approval of OCR-002.***

We are currently conducting a randomized, placebo-controlled double blind Phase 2b clinical trial in approximately 230 patients to evaluate the efficacy of intravenously administered OCR-002 in reducing the severity of HE symptoms among hospitalized HE patients. We commenced this trial in the fourth quarter of 2013, enrolled our first patient in January 2014 and approximately 150 patients have been enrolled as of February 29, 2016. The primary efficacy endpoint of this trial is time to clinically meaningful improvement in HE symptoms. Secondary endpoints include, among others, time to complete resolution of HE, proportional responder analysis, length of hospital stay and time in the intensive care unit. Since we are measuring a relatively large number of data points in this trial, we may observe adverse, mixed or contradictory results, any of which could adversely affect our ability to further develop and eventually commercialize OCR-002. In addition, the measurement of our primary endpoint is based upon a tool for measuring HE that we developed after consultation with the FDA, but which has yet to be accepted by the FDA or EMA as an acceptable tool. While we are validating this tool with other measurements in the trial, there can be no assurance that the tool is appropriate, that the FDA will agree with its utility and that it has been consistently applied in our trial.

The Phase 2a investigator-sponsored clinical trials of IV OCR-002 have studied, as a primary endpoint, the ability of OCR-002 to reduce plasma ammonia in patients with liver cirrhosis and acute liver failure. In these trials, we believe the dose of OCR-002 administered was insufficient to produce drug levels likely to be efficacious at lowering ammonia. While we believe that doses of OCR-002 being administered in our ongoing Phase 2b trial should lead to reductions in plasma ammonia, and that such reduction in plasma ammonia should result in faster time to clinically meaningful improvement in HE symptoms, the trial results may not bear this out. In addition, in the event that safety concerns are raised by this trial, we may no longer be able to pursue further development or commercialization efforts for OCR-002. Further, given that the oral and intravenous formulations of OCR-002 contain the same active pharmaceutical ingredient, safety concerns raised by this trial could also prevent us from further developing or commercializing the oral OCR-002 formulation.

In April 2014, we amended the protocol for our Phase 2b clinical trial to increase OCR-002 dosage from up to 10 grams per day to up to 20 grams per day. There can be no assurance that the increased dosage will have a favorable impact on efficacy or that we will be able to meet our clinical endpoints. In March 2015, an independent data monitoring committee, or DMC, conducted an interim analysis, reporting that the trial was not futile and that there were no clinically significant safety issues of concern. In addition, the DMC recommended that we continue the study and increase target enrollment from 140 patients to approximately 230 patients. There can be no assurances that the observations made at the interim regarding safety and futility will be consistent with the final study results for various reasons, including that the final study results based upon the full sample size may not be consistent with the results achieved by the limited sample size used to conduct the interim analysis and the recommended sample size of approximately 230 patients for the trial may not be sufficiently large to demonstrate efficacy.

Enrollment in our Phase 2b clinical trial is ongoing. To increase the pace of enrollment, we amended our trial protocol in March 2014 to broaden the eligible patient selection criteria. In October 2014, we further amended the protocol to broaden enrollment and clarify certain operational aspects of the trial. In addition, we expanded the scope of the trial to include additional sites in the United States and Europe. In spite of these changes, there can be no assurance that enrollment will occur on a timely basis or that the trial will ever achieve full enrollment.

***Favorable results in our Phase 1 clinical trial of oral formulations of OCR-002 may not be predictive of the safety and efficacy results in future clinical trials of the product candidate.***

A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier-stage development. Our Phase 1 clinical trial with oral formulations of OCR-002 in healthy subjects demonstrated a robust, extended-release pattern for all three pilot OCR-002 extended-release formulations, with mean plasma phenylacetate concentrations exceeding those achieved with RAVICTI® at all time points for at least 12 hours post-dose. In addition, phenylacetylglutamine, or PAGN, the end-product responsible for clearing ammonia, was greater in both plasma and urine for all three OCR-002 extended-release dosage forms than RAVICTI® at an approximately equivalent molar PAA dose. We cannot assure you that our future clinical trials will achieve similarly positive results due to a number of facts, including:

- Benchmarking against RAVICTI®, which works exclusively through phenylacetate while OCR-002 contains phenylacetate and ornithine, might not prove to be effective;
- We may never develop a commercially acceptable oral formulation of OCR-002; and
- Results in healthy subjects may not translate to patients afflicted with liver cirrhosis.

***Any safety or efficacy concerns, or delays in enrollment, relating to the lone remaining externally sponsored Phase 2a studies of OCR-002 may delay or prevent approval of OCR-002.***

The Acute Liver Failure Study Group of the National Institutes of Health is funding a Phase 2a trial of OCR-002, for the treatment of patients with acute liver injury, as well as those that have progressed to acute liver failure following acetaminophen overdose and other causes. Enrollment in this clinical trial is ongoing. In March 2013, the FDA approved less restrictive enrollment inclusion criteria for the trial, which we believe allows for a somewhat more rapid enrollment of patients. However, there can be no assurance that enrollment will occur on a timely basis or that the trial will ever achieve full enrollment. In the event that safety or efficacy or quality concerns are raised by this trial, we may no longer be able to pursue an acute liver failure indication for OCR-002.

An additional Phase 2a investigator-sponsored trial tested OCR-002 in patients with upper gastrointestinal bleeding associated with liver cirrhosis. In the first part of this trial, a 10-patient open label safety cohort, OCR-002 was shown to lower ammonia when administered as a continuous intravenous infusion of up to 10 grams per 24 hours. In February 2015, we announced the preliminary topline results of the second part of this trial, which was a randomized, placebo-controlled cohort of 38 patients. The data showed that OCR-002 lowered ammonia by 19.6% over the first 12 hours, compared to 3.2% over the first 12 hours in the placebo group, but this difference did not reach statistical significance. A statistically significant difference in urinary excretion of ammonia, as measured by PAGN, the key ammonia elimination pathway for OCR-002, was observed and OCR-002 demonstrated a favorable safety profile and appeared to be well tolerated. There can be no assurance that the favorable safety profile and urinary excretion of ammonia observed in the Phase 2a trial will translate to safety and efficacy in our Phase 2b trial, which uses a different dose of OCR-002 and a different, physician-assessed, endpoint. If the results of Phase 2b trial do not show sufficient safety and efficacy, we may be unable to achieve regulatory approval of intravenously administered OCR-002 for reducing the severity of HE symptoms among hospitalized HE patients.

***The patient populations suffering from both HE and acute liver failure are small. If we are unable to timely enroll our clinical trials or reach the desired enrollment levels, our development program for OCR-002 will likely be delayed.***

We estimate that in the United States, the annual number of hospitalizations that involve HE is approximately 180,000 cases, and the annual number of hospitalizations due to acute liver failure is approximately 2,000-3,000. We currently plan to enroll approximately 230 patients in our Phase 2b clinical trial and, if the Phase 2b clinical trial is successful, any future Phase 3 clinical trials we may conduct might include a number of patients that is greater than what we plan to enroll in our Phase 2b clinical trial. If the enrollment in these studies is delayed, it will result in delays in our OCR-002 development program and the time to commercialization.

In addition, if the population of patients afflicted with HE is smaller than we estimate, or is reduced over time due to other treatments for liver diseases, it could have a material adverse impact on the results of our operations.

***To obtain regulatory approval to market OCR-002 in additional indications and formulations, additional costly and lengthy clinical studies will be required, and the results are uncertain.***

As part of the regulatory approval process, we will conduct, at our own expense, nonclinical and clinical studies for each indication and formulation that we intend to pursue. We expect that the number of nonclinical and clinical studies that the regulatory authorities will require will vary. Generally, the number and size of clinical trials required for approval depends on the nature of the disease and size of the expected patient population that may be treated with a drug. We may need to perform additional nonclinical and clinical studies, which could result in delays in our ability to market OCR-002 for any additional indications, or in additional formulations.

***Serious adverse events or other safety risks could require us to abandon development and preclude or limit approval of OCR-002 to treat HE or acute liver failure.***

We may voluntarily suspend or terminate our clinical trials if at any time we believe that they present an unacceptable risk to participants or if preliminary data demonstrates that OCR-002 or any future product candidates we may develop are unlikely to receive regulatory approval or unlikely to be successfully commercialized. In addition, regulatory agencies or institutional review boards may at any time order the temporary or permanent discontinuation of our clinical trials or request that we cease using investigators in the clinical trials if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements, or that they present an unacceptable safety risk to participants. If we elect or are forced to suspend or terminate a clinical trial of OCR-002 to treat HE or acute liver failure, the commercial prospects for OCR-002 will be harmed and our ability to generate product revenues from OCR-002 may be delayed or eliminated.

***Even though we have received orphan drug designation, we may not receive orphan drug exclusivity for OCR-002.***

As part of our business strategy, we have obtained orphan drug designation in the United States for OCR-002 for the treatment of hyperammonemia and resultant HE in patients with acute liver failure and acute-on-chronic liver disease. We have also obtained orphan drug designation in the European Union for OCR-002 for the treatment of acute liver failure and are considering whether to submit such a request for the HE indication in the near future. In the United States, the company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years. This orphan drug exclusivity prevents the FDA from approving another application, including a full NDA, to market the same drug for the same orphan indication, except in very limited circumstances, including when the FDA concludes that the later drug is safer, more effective or makes a major contribution to patient care. For purposes of small molecule drugs, the FDA defines "same drug" as a drug that contains the same active chemical entity and is intended for the same use as the drug in question. A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition.

Even if we obtain orphan drug exclusivity for OCR-002, that exclusivity may not effectively protect the product from competition because different drugs can be approved for the same condition.

***Our product candidates are subject to extensive regulatory requirements.***

Even if a drug is FDA-approved, regulatory requirements still impose significant restrictions on a product's indicated uses and marketing and the FDA may impose ongoing requirements for potentially costly post-marketing studies. Furthermore, any new legislation addressing drug safety issues could result in delays or increased costs to assure compliance.

OCR-002, if approved, will be subject to ongoing regulatory requirements for labeling, packaging, storage, advertising, promotion, sampling, record-keeping and submission of safety and other post-market information, including both federal and state requirements in any jurisdiction in which we or a partner commercialize the product. In addition, manufacturers and their facilities are required to comply with extensive FDA requirements, including ensuring that quality control and manufacturing procedures conform to current Good Manufacturing Practice, or cGMP, requirements. As such, we and our contract manufacturers are subject to continual review and periodic inspections to assess compliance with cGMP. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, and quality control. We will also be required to report certain adverse reactions and production problems, if any, to the FDA and applicable foreign regulatory bodies, and to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we may not promote our products for indications or uses for which we do not have FDA or foreign approval, as applicable.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing, or labeling of a product, a regulatory agency may impose restrictions on that product, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may:

- issue warning letters;

- impose civil or criminal penalties;
- suspend regulatory approval;
- suspend any of our ongoing clinical trials;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our contract manufacturers' facilities; or
- seize or detain products or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenues from OCR-002, if approved. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected. Additionally, if we are unable to generate revenues from the sale of OCR-002, if approved, our potential for achieving profitability will be diminished and the capital necessary to fund our operations will be increased.

***Any product for which we obtain marketing approval could be subject to restrictions or withdrawal from the market and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our product candidates, when and if any of them are approved.***

Even if U.S. regulatory approval is obtained, the FDA may still impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly and time consuming post-approval studies, post-market surveillance or clinical trials. Our product candidates will also be subject to ongoing FDA requirements governing the labeling, packaging, storage, distribution, safety surveillance, advertising, promotion, recordkeeping and reporting of safety and other post-market information. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents. If we or a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requesting recall or withdrawal of the product from the market or suspension of manufacturing.

If we, or third party manufacturers for OCR-002 or any of our future product candidates, fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters or untitled letters;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical trials;
- refuse to approve pending applications or supplements or applications filed by us;
- suspend or impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products, refuse to permit the import or export of product, or request us to initiate a product recall.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our products and generate revenue.

The FDA has the authority to require a risk evaluation and mitigation strategy, or REMS, plan as part of an NDA or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry.

In addition, if OCR-002 or any future product candidates we may develop are approved, our product labeling, advertising and promotion would be subject to regulatory requirements and continuing regulatory review. The FDA strictly regulates the promotional claims that may be made about prescription products. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. If we receive marketing approval for OCR-002 or any future product candidates we may develop, physicians may nevertheless prescribe our products to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant sanctions. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also

requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

***Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and to commercialize OCR-002 and any future product candidates we may develop and affect the prices we may obtain.***

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval for OCR-002 and any future product candidates we may develop, restrict or regulate post-approval activities and affect our ability to profitably sell any of our product candidates for which we obtain marketing approval.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We are not sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements. Drug pricing and other healthcare costs also continue to be subject to intense political and societal pressures, which we anticipate will continue and escalate on a global basis. These pressures may result in harm to our business and reputation, cause our stock price to decline or experience periods of volatility and adversely affect results of operations and our ability to raise funds.

In the United States, the Medicare Modernization Act or MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for drugs. In addition, this legislation authorized Medicare Part D prescription drug plans to use formularies where they can limit the number of drugs that will be covered in any therapeutic class. As a result of this legislation and the expansion of federal coverage of drug products, we expect that there will be additional pressure to contain and reduce costs. These cost reduction initiatives and other provisions of this legislation could decrease the coverage and price that we receive for any approved products and could seriously harm our business. While the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively, the Health Care Reform Law, became law in the United States. The Health Care Reform law is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. Effective October 1, 2010, the Health Care Reform Law revised the definition of "average manufacturer price" for reporting purposes, which could increase the amount of Medicaid drug rebates to states. Further, the new law imposed a significant annual fee on companies that manufacture or import branded prescription drug products. Substantial new provisions affecting compliance have also been enacted, which may require us to modify our business practices with healthcare practitioners. We will not know the full effects of the Health Care Reform Law until applicable federal and state agencies issue regulations or guidance under the new law. Although it is too early to determine the effect of the Health Care Reform Law, the new law appears likely to continue the pressure on pharmaceutical pricing, especially under the Medicare program, and may also increase our regulatory burdens and operating costs.

***If our competitors are able to develop and market products that are preferred over OCR-002, our commercial opportunity for such product candidate will be reduced.***

We face competition from established pharmaceutical and biotechnology companies, as well as from academic institutions, government agencies and private and public research institutions, which may in the future develop products to treat HE and acute liver failure. Even if we complete development, obtain regulatory approval and commercialize OCR-002 to treat HE, we will face competition from Salix Pharmaceuticals, Inc., a subsidiary of Valeant Pharmaceuticals, International, Inc., the manufacturer of rifaximin, as well as generic manufacturers of lactulose and potential generic manufacturers of rifaximin. In addition, researchers are continually learning more about liver disease including HE, and new discoveries may lead to new therapies. Horizon Pharma could also recommence development of RAVICTI® for HE. As a result, OCR-002 may be rendered less competitive. Other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity will be reduced if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient or are less expensive than OCR-002. We expect that our ability to compete effectively will depend upon, among other things, our ability to:

- successfully and rapidly complete clinical trials and obtain all required regulatory approvals in a timely and cost-effective manner;
- maintain patent protection for OCR-002 and otherwise prevent the introduction of generics of OCR-002;
- attract and retain key personnel;
- build an adequate sales and marketing infrastructure;
- obtain adequate reimbursement from third-party payors; and
- maintain positive relationships with patient advocacy groups.

***The commercial success of OCR-002 will depend upon the degree of market acceptance among physicians, patients, patient advocacy groups, health care payors and the medical community. If we fail to obtain and sustain adequate reimbursement of OCR-002 from commercial third-party and government payors, our revenue will be more limited and it will be more difficult to achieve profitability.***

OCR-002, if approved, may not gain sufficient market acceptance among physicians, patients, patient advocacy groups, health care payors and the medical community and our business may suffer. The degree of market acceptance of OCR-002, after approval, if any, will depend on a number of factors, including:

- the effectiveness of OCR-002 as compared to other products indicated for HE or other similar disorders;
- the prevalence and severity of any side effects;
- the market price and patient out-of-pocket costs of OCR-002 relative to other treatment options, including any generics;
- relative convenience and ease of administration with respect to the IV and oral formulations of OCR-002;
- willingness by patients to stop using current treatments and adopt a new treatment;
- restrictions on healthcare provider prescribing of and patient access to our products due to a REMS;
- the strength of our marketing and distribution organizations;
- the quality of our relationship with patient advocacy groups; and
- commercial viability, including sufficient third-party coverage or reimbursement.

If we fail to obtain and sustain an adequate level of reimbursement for OCR-002 by commercial third-party and governmental payors, our sales, revenue and gross margins would be adversely affected, and we may not find it commercially viable. Third-party payors, such as government or private health care insurers, carefully review and increasingly question the coverage of, and challenge the prices charged for, drugs. Reimbursement rates from private health insurance companies vary depending on the company, the insurance plan and other factors. A current trend in the United States health care industry is toward cost containment. Large public and private payors, managed care organizations, group purchasing organizations and similar organizations are exerting increasing influence on decisions regarding the use of, and reimbursement levels for, particular treatments. Such third-party payors, including Medicare, are questioning the coverage of, and challenging the prices charged for, medical products and services, and many third-party payors limit coverage of or reimbursement for newly approved health care products. In particular, third-party payors may limit the covered indications. Cost-control initiatives could decrease the price we might establish for products, which could result in product revenues being lower than anticipated. If the prices for our products decrease or if governmental and other third-party payors do not provide adequate coverage and reimbursement levels, our revenue and prospects for profitability will suffer.

Reimbursement systems in international markets vary significantly by country and by region, and reimbursement approvals must be obtained on a country-by-country basis. Reimbursement in the European Union must be negotiated on a country-by-country basis and in many countries the product cannot be commercially launched until reimbursement is approved. The negotiation process in some countries can exceed 12 months.

***If we are unable to establish an organization capable of successfully commercializing OCR-002 in the United States, our business may be harmed.***

We currently do not have an organization capable of commercializing an approved product candidate. If OCR-002 is approved by the FDA for commercial sale, we may choose to market OCR-002 directly to physicians in the United States through our own sales and marketing force and related internal commercialization infrastructure. We will need to incur significant additional expenses and commit significant additional management resources to establish and train an internal sales and marketing force to market and sell OCR-002. We may not be able to successfully establish these capabilities despite these additional expenditures. We will also have to compete with other pharmaceutical and life sciences companies to recruit, hire, train and retain sales and marketing personnel. In the event we are unable to successfully market and promote OCR-002, our business may be harmed.

***If we fail to establish an effective distribution process utilizing specialty pharmacies, our business could suffer materially and our stock price could decline.***

We do not currently have the infrastructure necessary for distributing pharmaceutical products to patients. We intend to contract with a third-party logistics company to warehouse these products and distribute them to specialty pharmacies. A specialty pharmacy is a pharmacy that specializes in the dispensing of medications for complex or chronic conditions which require a high level of patient education and ongoing management. This distribution network will require significant coordination with our sales and marketing and finance organizations. Failure to secure contracts with a logistics company and specialty pharmacies could negatively impact the distribution of our products, and failure to coordinate financial systems could negatively impact its ability to accurately report product revenue. If we are unable to effectively establish and manage the distribution process, the commercial launch and sales of our products will be delayed or severely compromised and our results of operations may be harmed.

In addition, the use of specialty pharmacies involves certain risks, including, but not limited to, risks that these specialty pharmacies will:

- not provide us with accurate or timely information regarding their inventories, the number of patients who are using our products, or complaints regarding our products;
- not effectively sell or support our products;
- reduce their efforts or discontinue to sell or support our products;
- not devote the resources necessary to sell our products in the volumes and within the time frames that we expect;
- not comply with any requirements imposed on pharmacies through REMS;
- be unable to satisfy financial obligations to us; or
- cease operations.

Any such failure may result in decreased product sales and lower product revenue, which would harm our business.

***Even if the FDA approves OCR-002 in the United States, we may never obtain approval for or commercialize OCR-002 outside of the United States, which would limit our ability to realize our full market potential.***

In order to market OCR-002 outside of the United States, we must comply with the regulatory requirements of, and obtain the required regulatory approvals in, other countries. Clinical trials conducted in one country may not be accepted by the regulatory authorities in other countries, and obtaining regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approval could require additional nonclinical studies or clinical trials, which could be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of OCR-002 in those countries. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals or if regulatory approvals in international markets are delayed, our target market will be reduced and our ability to realize the full market potential of our products will be harmed.

***Our future growth depends, in part, on our ability to penetrate foreign markets, where we are subject to additional regulatory burdens and other risks and uncertainties.***

Our future profitability will depend, in part, on our ability to grow and ultimately maintain our sales in foreign markets. We may rely on third parties to support our foreign operations.

Any foreign operations we establish in the future subject us to additional risks and uncertainties, including:

- our customers' ability to obtain reimbursement for our products in foreign markets;
- our inability to directly control commercial activities because we are relying on third parties who may not put the same priority on our products as we would;
- the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements;
- different medical practices and customs in foreign countries affecting acceptance in the marketplace;
- import or export licensing requirements;
- longer accounts receivable collection times;
- longer lead times for shipping;
- language barriers for technical training;
- reduced protection of intellectual property rights in some foreign countries;
- foreign currency exchange rate fluctuations; and
- the interpretation of contractual provisions governed by foreign laws in the event of a contract dispute.

Foreign sales of our products could also be adversely affected by the imposition of governmental controls, political and economic instability, trade restrictions, changes in tariffs and difficulties in staffing and managing foreign operations .

***If we obtain approval to commercialize OCR-002 outside of the United States, a variety of risks associated with international operations could materially adversely affect our business.***

If OCR-002 is approved outside the United States, we will likely enter into agreements with third parties to commercialize and distribute OCR-002 outside the United States. We expect that we will be subject to additional risks related to entering into or maintaining these international business relationships, including:

- different regulatory requirements for drug approvals in foreign countries;
- differing U.S. and foreign drug import and export rules;
- reduced protection for intellectual property rights in foreign countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- different reimbursement systems;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- potential liability resulting from development work conducted by these distributors; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters.

***If we fail to attract and retain senior management and key scientific personnel, we may be unable to successfully develop OCR-002 or any future product candidates we may develop, conduct clinical trials and commercialize OCR-002 or any future product candidates we may develop.***

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, as well as other senior scientists and members of our management team. The loss of services of any of these individuals or one or more of our other members of senior management could delay or prevent the successful development of OCR-002 or the commercialization of OCR-002 or any other product candidates we may develop. We need to hire and retain qualified personnel for the development, manufacture and commercialization of drugs. We could experience problems in the future attracting and retaining qualified employees. For example, competition for qualified personnel in the biotechnology and pharmaceuticals fields is intense. We may not be able to attract and retain quality personnel on acceptable terms who have the expertise we need to sustain and grow our business.

***If we are found in violation of federal or state "fraud and abuse" laws, we may be required to pay a penalty and/or be suspended from participation in federal or state health care programs, which may adversely affect our business, financial condition and results of operation.***

In the United States, we are subject to various federal and state health care "fraud and abuse" laws, including anti-kickback laws, false claims laws and other laws intended to reduce fraud and abuse in federal and state health care programs. The federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce the referral of business, including the purchase, order or prescription of a particular drug for which payment may be made under a federal health care program, such as Medicare or Medicaid. Under federal government regulations, some arrangements, known as safe harbors, are deemed not to violate the federal Anti-Kickback Statute. Although we seek to structure our business arrangements in compliance with all applicable requirements, these laws are broadly written, and it is often difficult to determine precisely how the law will be applied in specific circumstances. Accordingly, it is possible that our practices may be challenged under the federal Anti-Kickback Statute. False claims laws prohibit anyone from knowingly and willfully presenting or causing to be presented for payment to third-party payors, including government payors, claims for reimbursed drugs or services that are false or fraudulent, claims for items or services that were not provided as claimed, or claims for medically unnecessary items or services. Cases have been brought under false claims laws alleging that GMP manufacturing violations or off-label promotion of pharmaceutical products or the provision of kickbacks has resulted in the submission of false claims to governmental health care programs. Under the Health Insurance Portability and Accountability Act of 1996, and its relevant amendments, we are prohibited from knowingly and willfully executing a scheme to defraud any health care benefit program, including private payors, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for health care benefits, items or services. Violations of fraud and abuse laws may be punishable by criminal and/or civil sanctions, including fines and/or exclusion or suspension from federal and state health care programs such as Medicare and Medicaid and debarment from contracting with the U.S. government. In addition, private individuals have the ability to bring actions on behalf of the government under the federal False Claims Act as well as under the false claims laws of several states.

Many states have adopted laws similar to the federal anti-kickback statute, some of which apply to the referral of patients for health care services reimbursed by any source, not just governmental payors. In addition, California and a few other states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America, Code on Interactions with Healthcare Professionals. In addition, several states impose other marketing restrictions or require pharmaceutical companies to make marketing or price disclosures to the state. There are ambiguities as to what is required to comply with these state requirements and if we fail to comply with an applicable state law requirement we could be subject to penalties.

Neither the government nor the courts have provided definitive guidance on the application of fraud and abuse laws to our business. Law enforcement authorities are increasingly focused on enforcing these laws, and it is possible that some of its practices may be challenged under these laws. While we believe we has structured our business arrangements to comply with these laws, it is possible that the government could allege violations of, or convict us of violating, these laws. If we are found in violation of one of these laws, we could be required to pay a penalty and could be suspended or excluded from participation in federal or state health care programs, and our business, financial condition and results of operations may be adversely affected.

### **Risks Related to Our Financial Position and Need for Additional Capital**

*We anticipate that we will continue to incur net losses for the foreseeable future.*

We anticipate that a substantial portion of our capital resources and efforts in the foreseeable future will be focused on completing the development and obtaining regulatory approval of OCR-002. As a result, we expect to continue to incur significant and increasing operating losses and negative cash flows for the foreseeable future. These losses have had and will continue to have an adverse effect on stockholders' deficit and working capital.

*We have a significant amount of debt that may cause risks that could adversely affect our business, operating results and financial condition.*

We entered into a Loan and Security Agreement, or the Loan Agreement, with Oxford Finance LLC and Silicon Valley Bank, or collectively, the Lenders on July 30, 2015. The Loan Agreement provides up to \$20 million principal in new term loans, \$10 million of which was funded on July 30, 2015. We refer to this facility as the Term Loan Facility. The remaining \$10 million is available for draw until December 31, 2016 at the Company's discretion, subject to achievement of certain financial and clinical milestones. The Term Loan Facility is secured by substantially all of our assets and the assets of our subsidiary, Ocera Subsidiary, Inc., except that the collateral does not include any intellectual property held by us or our subsidiary, Ocera Subsidiary, Inc.

However, pursuant to the terms of a negative pledge arrangement, we have agreed not to encumber any of the intellectual property of ours or our subsidiaries. The level and nature of our indebtedness could, among other things:

- make it difficult for us to obtain any necessary financing in the future;
- limit our flexibility in planning for or reacting to changes in our business;
- reduce funds available for use in our operations and corporate development initiatives;
- impair our ability to incur additional debt because of financial and other restrictive covenants or the liens on our assets that secure our current debt;
- hinder our ability to raise equity capital, because in the event of a liquidation of our business, debt holders receive a priority before equity holders;
- make us more vulnerable in the event of a downturn in our business; and
- place us at a possible competitive disadvantage relative to less leveraged competitors and competitors that have better access to capital resources.

In addition, if we do not meet certain conditions set forth in the Loan Agreement, we will not be able to draw the remaining \$10 million available under the Term Loan Facility, which could materially harm our financial condition. We may also incur significantly more debt in the future, which will increase each of the risks described above related to our indebtedness.

*The Loan Agreement for the Term Loan Facility contains operating covenants that may restrict our business and financing activities.*

The Loan Agreement restricts, among other things, our ability to:

- convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets;
- engage in any business other than the businesses we currently engage in or reasonably related thereto;
- liquidate or dissolve;
- make certain management changes;
- undergo certain change of control events;
- create, incur, assume, or be liable with respect to certain indebtedness;

- grant certain liens;
- pay dividends and make certain other restricted payments;
- make certain investments;
- enter into any material transactions with any affiliates, with certain exceptions;
- make payments on any subordinated debt; or
- permit certain of our subsidiaries to maintain, own or otherwise hold any material assets or conduct any business operations other than as disclosed to the Lenders.

The operating restrictions and covenants in the Loan Agreement, as well as any future financing agreements that we may enter into, may restrict our ability to finance our operations, engage in business activities or expand or fully pursue our business strategies. Our ability to comply with these covenants may be affected by events beyond our control and we may not be able to meet those covenants. A breach of any of the covenants under the Loan Agreement could result in a default under the Loan Agreement, which could cause all of the outstanding indebtedness under the Term Loan Facility to become immediately due and payable.

***If we fail to obtain the capital necessary to fund our operations, we will be unable to successfully develop and commercialize our most advanced product candidates.***

We will need to obtain additional financing to fund future operations, including the development and commercialization of OCR-002 and to support sales and marketing activities. Our future funding requirements will depend on many factors, including, but not limited to:

- the initiation, progress, timing, scope and costs of our nonclinical studies and clinical trials, including the ability to timely enroll patients in our current, planned and potential future clinical trials;
- the time and cost necessary to obtain regulatory approvals;
- the costs of manufacturing clinical and commercial supplies of OCR-002 and any other product candidates we may develop;
- payments of milestones and royalties to third parties;
- the costs and timing of establishing sales and marketing capabilities in selected markets;
- the terms and timing of establishing collaborations, license agreements and other partnerships on terms favorable to us;
- the time and cost necessary to respond to technological and market developments;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- any changes made to, or new developments in, our restated collaboration agreement with UCL Business PLC, or UCL, or any new collaborative, licensing and other commercial relationships that we may establish.

We have not generated any revenue from the sale of any products and do not know when, or if, we will generate any revenue. Until we can generate a sufficient amount of revenue, we may raise additional funds through collaborations and public or private debt or equity financings. Additional funds may not be available when needed on terms that are acceptable, or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of existing stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of existing stockholders. Debt financing, if available, would result in increased fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. We may seek to access the public or private capital markets whenever conditions are favorable, even if we do not have an immediate need for additional capital at that time.

We believe that our current cash and cash equivalents will be sufficient to fund our anticipated operating requirements through at least the next twelve months. This estimate is based on a number of assumptions that may prove wrong, and changing circumstances beyond our control may cause the consumption of capital more rapidly than currently anticipated. Inability to obtain funding when needed could seriously harm the business.

***Our future financial results could be adversely impacted by asset impairments or other charges.***

Applicable accounting standards requires that we test assets determined to have long lives for impairment on an annual, or on an interim basis if certain events occur or circumstances change that would reduce the fair value of an asset below its carrying value. In addition, long-lived assets with finite lives are tested for impairment whenever events or changes in circumstances indicate that its carrying value may not be recoverable. A significant decrease in the fair value of a long-lived asset, an adverse change in the extent or manner in which a long-lived asset is being used or in its physical condition or an expectation that a long-lived asset will be sold or disposed of significantly before the end of its previously estimated life are among several of the factors that could result in an impairment charge. We intend to evaluate the carrying value of our assets to determine if the merger and private placement indicate that the carrying amounts of such assets may not be

recoverable. Such a review could result in an impairment charge, which could have a negative impact on our results of operations and financial position, as well as on the market price of our common stock.

### **Risks Related to Our Reliance on Third Parties**

***We currently depend on third parties to conduct some of the operations of our clinical trials in connection with the development and application for regulatory approval of OCR-002.***

We rely on numerous third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories to oversee some of the operations of our clinical trials and to perform data collection and analysis. As a result, we may face additional delays outside of our control if these parties do not perform their obligations in a timely fashion or in accordance with regulatory requirements. If these third parties do not successfully carry out their contractual duties or obligations and meet expected deadlines, if they need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or for other reasons, our financial results and the commercial prospects for OCR-002 or our other potential product candidates could be harmed, our costs could increase and our ability to obtain regulatory approval and commence product sales could be delayed.

***We have no manufacturing capacity and anticipate continued reliance on third-party manufacturers for the development and commercialization of our products.***

We do not currently operate manufacturing facilities for clinical or commercial production of any product. We have limited personnel experienced in drug manufacturing and formulation, and we lack the resources and the capabilities to manufacture OCR-002 on a clinical or commercial scale. We do not intend to develop facilities for the manufacture of drug substance for clinical trials or products for commercial purposes in the foreseeable future. We rely on third-party manufacturers to produce bulk drug substance and drug products required for our clinical trial of OCR-002 and for developing the oral formulation of OCR-002. We plan to continue to rely upon contract manufacturers and, potentially, collaboration partners to manufacture commercial quantities of our products if and when approved for marketing by the applicable regulatory authorities. We have clinical supplies of the active pharmaceutical ingredient for OCR-002 manufactured for us by a single drug substance supplier Helsinn Chemicals SA. The OCR-002 finished product manufacturing and filling is undertaken by AAI Pharma Service Corp. on our behalf. We have not secured commercial supply agreements with any contract manufacturers and can give no assurance that we will enter commercial supply agreements with any contract manufacturers on favorable terms or at all. Our contract manufacturers' failure to achieve and maintain high manufacturing standards, in accordance with applicable regulatory requirements, or the incidence of manufacturing errors, could result in patient injury or death, product shortages, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously harm our business. Contract manufacturers often encounter difficulties involving production yields, quality control and quality assurance, as well as shortages of qualified personnel.

Our existing manufacturer and any future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business. In the event of a natural disaster, business failure, strike or other difficulty, we may be unable to replace a third-party manufacturer in a timely manner and the production of our products would be interrupted, resulting in delays and additional costs.

***Some of the intellectual property necessary for the commercialization of our products is or will be licensed from third parties, which will require us to pay milestones and royalties.***

We have a license agreement on OCR-002 with UCL for worldwide rights to develop and commercialize the product candidate and related technologies for any use. We may be required to make future milestone payments to UCL totaling up to \$20.0 million upon the achievement of various milestones related to clinical and regulatory events for OCR-002. We may also be required to pay milestone payments totaling up to \$35.0 million upon the achievement of various milestones related to future net sales of OCR-002. Should we seek approval for more than two indications with either formulation of OCR-002 we may be required to pay additional clinical and regulatory milestones. We are also obligated to pay tiered royalties in the low to mid-single digits on future net sales of the licensed product.

We may become obligated to make milestone or royalty payments when we do not have the cash on hand to make these payments or have budgeted cash for our development efforts. This could cause us to delay our development efforts, curtail our operations, scale back our commercialization and marketing efforts or seek additional capital to meet these obligations, which could be on terms unfavorable to us. Additionally, if we fail to make a required payment and do not cure the failure within the required time period, the licensor may be able to terminate our license to use the licensed technology. If our license from UCL is terminated, it may be impossible for us to commercialize OCR-002.

***We are increasingly dependent on information technology systems to operate our business and a cyber attack or other breach of our systems, or those of third parties on whom we may rely, could subject us to liability or interrupt the operation of our business.***

We are increasingly dependent on information technology systems to operate our business. A breakdown, invasion, corruption, destruction or interruption of critical information technology systems by employees, others with authorized access to our systems or unauthorized persons could negatively impact operations. In the ordinary course of business, we collect, store and transmit confidential information and it is critical that we do so in a secure manner to maintain the confidentiality and integrity of such information. Additionally, we outsource certain elements of our information technology systems to third parties. As a result of this outsourcing, our third party vendors may or could have access to our confidential information making such systems vulnerable. Data breaches of our information technology systems, or those of our third party vendors, may pose a risk that sensitive data may be exposed to unauthorized persons or to the public. While we believe that we have taken appropriate security measures to protect our data and information technology systems, and have been informed by our third party vendors that they have as well, there can be no assurance that our efforts will prevent breakdowns or breaches in our systems, or those of our third party vendors, that could adversely affect our business.

### **Risks Related to Product Liability**

***If product liability lawsuits are successfully brought against us, we will incur substantial liabilities and may be required to limit the commercialization of OCR-002 or other products.***

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates or products that we may develop;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- the inability to commercialize our product candidates; and
- a decline in our stock price.

In addition, while we continue to take what we believe are appropriate precautions, we may be unable to avoid significant liability if any product liability lawsuit is brought against us.

***If product liability lawsuits are successfully brought against us, our insurance may be inadequate.***

We are exposed to the potential product liability risks inherent in the testing, manufacturing and marketing of human pharmaceuticals. We plan to maintain insurance against product liability lawsuits for commercial sale of OCR-002, if approved for sale. We currently maintain insurance for the clinical trials of product candidates. Biopharmaceutical companies must balance the cost of insurance with the level of coverage based on estimates of potential liability. Historically, the potential liability associated with product liability lawsuits for pharmaceutical products has been unpredictable. Although we believe that our current insurance is a reasonable estimate of our potential liability and represents a commercially reasonable balancing of the level of coverage as compared to the cost of the insurance, we may be subject to claims in connection with clinical trials and commercial use of OCR-002 and other product candidates we may develop, for which existing insurance coverage may not be adequate.

The product liability insurance we will need to obtain in connection with the commercial sales of our product and product candidates, if and when they receive regulatory approval, may be unavailable in meaningful amounts or at a reasonable cost. If we are the subject of a successful product liability claim that exceeds the limits of any insurance coverage obtained, we may incur substantial charges that would adversely affect earnings and require the commitment of capital resources that might otherwise be available for the development and commercial launch of product programs.

## Risks Related to Our Intellectual Property

### *We may not be able to protect our proprietary technology in the marketplace.*

We place considerable importance on obtaining patent protection for new technologies, products and processes because our commercial success will depend, in part, on obtaining patent protection for new technologies, products and processes, successfully defending these patents against third-party challenges and successfully enforcing our patents against third party competitors. To that end, we file applications for patents covering compositions of matter or uses of our product candidates or our proprietary processes as well as other intellectual property important to our business.

Where appropriate, we seek patent protection for certain aspects of our technology. Patent protection may not be available for some of the product candidates or technologies we are developing. If we must spend significant time and money protecting or enforcing our patents, designing around patents held by others or licensing, potentially for large fees, patents or other proprietary rights held by others, our business and financial prospects may be harmed. We may not develop additional proprietary products which are patentable.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal, scientific and factual questions. Accordingly, our patent applications may never be approved by U.S. or foreign patent offices and the patents and patent applications relating to our product candidates and technologies may be challenged, invalidated or circumvented by third parties and might not protect us against competitors with similar products or technologies. Publication of information related to OCR-002 and future product candidates we may develop may prevent us from obtaining or enforcing patents relating to these product candidates, including without limitation composition-of-matter patents, which are generally believed to offer the strongest patent protection.

We own, or have licensed, patents in the United States and in certain foreign jurisdictions related to OCR-002. Patents that we own or license do not ensure the protection of our intellectual property for a number of reasons, including without limitation the following:

- we may be required to disclaim part of the term of one or more patents;
- there may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim;
- there may be prior art of which we are aware, which we do not believe affects the validity or enforceability of a patent claim, but which, nonetheless ultimately may be found to affect the validity or enforceability of a patent claim;
- there may be other patents existing in the patent landscape for OCR-002 that will affect our freedom to operate;
- if our patents are challenged, a court could determine that they are not valid or enforceable;
- a court could determine that a competitor's technology or product does not infringe our patents; and
- our patents could irretrievably lapse due to failure to pay fees or otherwise comply with regulations, or could be subject to compulsory licensing.

If we encounter delays in our development or clinical trials, the period of time during which we could market our products under patent protection would be reduced.

Others have filed, and in the future are likely to file, patent applications covering products and technologies that are similar, identical or competitive to ours, or important to our business. We cannot be certain that any patent application owned by a third party will not have priority over patent applications filed or in-licensed by us, or that we or our licensors will not be involved in interference, opposition or invalidity proceedings before U.S. or foreign patent offices. In addition, under the America Invents Act of 2011, or AIA, the U.S. patent system, among other things, has transitioned from a first-to-invent to a first-to-file patent system, increases the scope of prior art available for patentability and invalidity determinations for patent applications filed under the first-to-file system, and introduces new procedures, including post-grant review and inter partes review, for challenging U.S. patents once they have granted. The various provisions of the AIA may impact our ability to secure meaningful patent protection for inventions that we develop in the future.

We also rely on trade secrets to protect technology in cases when we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. While we require employees, academic collaborators, consultants and other contractors to enter into confidentiality agreements, we may not be able to adequately protect our trade secrets or other proprietary information. Our research collaborators and scientific advisors have rights to publish data and information in which we have rights. If we cannot maintain the confidentiality of our technology and other confidential information in connection with our collaborators and advisors, our ability to receive patent protection or protect our proprietary information may be imperiled.

### *We may not be able to enforce our intellectual property rights throughout the world.*

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property

rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to life sciences. This could make it difficult for us to stop the infringement of our in-licensed patents owned patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit.

Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain adequate protection for our technology and the enforcement of intellectual property.

***We may infringe the intellectual property rights of others, which may prevent or delay our product development efforts and stop us from commercializing or increase the costs of commercializing OCR-002 or any future products we may develop.***

Our commercial success depends significantly on our ability to operate without infringing the patents and other intellectual property rights of third parties. For example, there could be issued patents of which we are not aware that our products infringe. There also could be patents that we believe we do not infringe, but that we may ultimately be found to infringe. Moreover, patent applications are in some cases maintained in secrecy until patents are issued. The publication of discoveries in the scientific or patent literature frequently occurs substantially later than the date on which the underlying discoveries were made and patent applications we filed. Because patents can take many years to issue, there may be currently pending applications of which we are unaware that may later result in issued patents that our products infringe. For example, pending applications may exist that provide support or can be amended to provide support for a claim that results in an issued patent that our product infringes.

Third parties may assert that we are employing their proprietary technology without authorization. If a court held that any third-party patents are valid, enforceable and cover OCR-002 and any future products we may develop or their use, the holders of any of these patents may be able to block our ability to commercialize OCR-002 or any future products we may develop unless we obtained a license under the applicable patents, or until the patents expire. We may not be able to enter into licensing arrangements or make other arrangements at a reasonable cost or on reasonable terms. Any inability to secure licenses or alternative technology could result in delays in the introduction of OCR-002 or any future products we may develop or lead to prohibition of the manufacture or sale of products by us.

***We may be unable to adequately prevent disclosure of trade secrets and other proprietary information.***

We rely on trade secrets to protect our proprietary know-how and technological advances, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. We rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to protect our trade secrets and other proprietary information. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover our trade secrets and proprietary information. Costly and time consuming litigation could be necessary to enforce and determine the scope of our proprietary rights. Failure to obtain or maintain trade secret protection could enable competitors to use our proprietary information to develop products that compete with our products or cause additional, material adverse effects upon our competitive business position.

***Any lawsuits relating to infringement of intellectual property rights necessary to defend us or enforce our rights will be costly and time consuming.***

Our ability to defend our intellectual property may require us to initiate litigation to enforce our rights or defend our activities in response to alleged infringement of a third-party. In addition, we may be sued by others who hold intellectual property rights who claim that their issued patents are infringed by OCR-002 or any future products or product candidates. These lawsuits can be very time consuming and costly. There is a substantial amount of litigation involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries generally.

In addition, our patents and patent applications, or those of our licensors, could face other challenges, such as interference proceedings, opposition proceedings, re-examination proceedings, inter-partes review proceedings, post-grant review proceedings, and derivation proceedings. Any of these challenges, if successful, could result in the invalidation of, or in a narrowing of the scope of, any of our patents and patent applications subject to challenge. Any of these challenges, regardless of their success, would likely be time consuming and expensive to defend and resolve and would divert our management's time and attention.

***We may be subject to claims that we have wrongfully hired an employee from a competitor or that we or our employees or consultants have wrongfully used or disclosed alleged confidential information or trade secrets of their former employers.***

As is commonplace in our industry, we employ individuals who were previously employed at, or performed services for, other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject in the future to claims that our employees or prospective employees are subject to a continuing obligation to their former employers (such as non-competition or non-solicitation obligations) or claims that our employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

***If we do not obtain protection under the Hatch-Waxman Amendments and similar foreign legislation by extending the patent terms and obtaining data exclusivity for OCR-002 or any future product candidates we may develop, our business may be materially harmed.***

Depending upon the timing, duration and specifics of FDA marketing approval of OCR-002 or any future product candidates we may develop, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

### **Risks Related to Ownership of Our Capital Stock**

***Our principal stockholders, executive officers and directors own a significant percentage of our common stock and will be able to exert a significant control over matters submitted to the stockholders for approval.***

Our officers and directors, and stockholders who own more than 5% of our common stock beneficially own a significant percentage of our common stock. This significant concentration of share ownership may adversely affect the trading price for our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders. These stockholders, if they acted together, could significantly influence all matters requiring approval by the stockholders, including the election of directors. The interests of these stockholders may not always coincide with the interests of other stockholders.

***The trading price of the shares of our common stock could be highly volatile, and purchasers of our common stock could incur substantial losses.***

Our stock price is likely to be volatile. The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price at which it was purchased. The market price for our common stock may be influenced by many factors, including:

- results of the development efforts involving OCR-002 or any future product candidates we may develop, those of our competitors or those of other companies in our market sector;
- regulatory developments in the United States and foreign countries;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems, especially in light of current reforms to the U.S. healthcare system;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of securities analysts' reports or recommendations;
- sales of our stock by insiders and 5% or greater stockholders;
- general economic, industry and market conditions;
- additions or departures of key personnel;
- intellectual property, product liability or other litigation against us;

- expiration or termination of our relationships with our collaborators; and
- the other factors described in this “Risk Factors” section.

In addition, in the past, stockholders have initiated class action lawsuits against biotechnology and pharmaceutical companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources, which could have a material adverse effect on our business, financial condition and results of operations.

***Our quarterly operating results may fluctuate significantly.***

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expenses related to our development programs;
- addition, modification or termination of our clinical trials;
- any intellectual property infringement lawsuit in which we may become involved;
- regulatory developments affecting OCR-002 or any future product candidates we may develop;
- our execution of any collaborative, licensing or similar arrangements, and the timing of payments we may make or receive under these arrangements; and
- the achievement and timing of milestone payments under our existing strategic partnership agreements.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially.

***Our ability to use net operating loss and tax credit carryforwards and certain built-in losses to reduce future tax payments is limited by provisions of the Internal Revenue Code, and may be subject to further limitation as a result of the Merger and prior or future offerings of our stock.***

Section 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, contain rules that limit the ability of a company that undergoes an ownership change, which is generally any change in ownership of more than 50% of its stock over a three-year period, to utilize its net operating loss and tax credit carryforwards and certain built-in losses recognized in years after the ownership change. These rules generally operate by focusing on ownership changes involving stockholders owning directly or indirectly 5% or more of the stock of a company and any change in ownership arising from a new issuance of stock by the company. Generally, if an ownership change occurs, the yearly taxable income limitation on the use of net operating loss and tax credit carryforwards and certain built-in losses is equal to the product of the applicable long term tax exempt rate and the value of the company's stock immediately before the ownership change. We may be unable to offset future taxable income, if any, with losses, or our tax liability with credits, before such losses and credits expire and therefore would incur larger federal income tax liability.

It is likely that the Merger and other sales of our stock, either on a standalone basis or when combined with future transactions, have caused or will cause us to undergo one or more additional ownership changes. In that event, we generally would not be able to use our pre-change loss or credit carryovers or certain built-in losses prior to such ownership change to offset future taxable income in excess of the annual limitations imposed by Sections 382 and 383 and those attributes already subject to limitations as a result of our prior ownership changes may be subject to more stringent limitations.

***Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.***

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include:

- the prohibition on actions by written consent of our stockholders;
- the limitation on who may call a special meeting of stockholders;
- the establishment of advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon at stockholder meetings;
- the ability of our board of directors to issue preferred stock without stockholder approval, which would increase the number of outstanding shares and could thwart a takeover attempt; and
- the requirement of at least 75% of the outstanding common stock to amend any of the foregoing provisions.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirers to negotiate with our board of directors, they would

apply even if an offer rejected by our board were considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

***We do not intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.***

We have never declared or paid any cash dividend on our common stock and do not currently intend to do so for the foreseeable future. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Therefore, the success of an investment in shares of our common stock will depend upon any future appreciation in their value. There is no guarantee that shares of our common stock will appreciate in value or even maintain the price at which our stockholders have purchased their shares.

***Future sales of our common stock may cause our stock price to decline.***

If our existing stockholders sell, or indicate an intent to sell, substantial amounts of our common stock in the public market after legal restrictions lapse, the trading price of our common stock could decline significantly. Moreover, a relatively small number of our stockholders own large blocks of shares. We cannot predict the effect, if any, that public sales of these shares or the availability of these shares for sale will have on the market price of our common stock.

***Failure to maintain effective internal controls could have a material adverse effect on our ability to produce accurate financial statements and on our stock price.***

As a public company, we are subject to rules and regulations that require us to maintain the effectiveness of both disclosure controls and procedures and internal control over financial reporting. Effective disclosure controls and procedures and internal control over financial reporting are necessary for us to provide reliable financial reports, effectively prevent fraud and operate successfully as a public company. If we cannot provide reliable financial reports or prevent fraud, our reputation and operating results would be harmed. We are subject to the requirement to perform an annual management assessment of the effectiveness of our internal controls over financial reporting and obtain a report from our independent registered public accounting firm addressing the effectiveness of our internal controls over financial reporting.

We may not be able to maintain effective disclosure controls and procedures and internal control over financial reporting in the future. If we are not able to maintain adequate compliance with these requirements in future years, we may be unable to report our financial information on a timely basis or our independent registered public accounting firm may be unable to express an opinion on the effectiveness of our internal control over financial reporting, which could result in SEC or other regulatory investigations or proceedings, violations of NASDAQ listing rules and loss of investor confidence in the reliability of our financial statements, and, in turn, materially adversely affect our business, reputation, financial position, results of operations and the market price of our common stock. In addition, we could be required to incur substantial accounting and auditing expense and significant management time in complying with these requirements, remediating any material weaknesses that may be identified in the future, or responding to any regulatory investigations or proceedings.

***If securities or industry analysts do not publish research or reports or publish unfavorable research or reports about our business, our stock price and trading volume could decline.***

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us, our business, our market or our competitors. We have limited research coverage by securities and industry analysts and may not maintain such coverage or obtain research coverage by additional securities and industry analysts. If we do not maintain such existing coverage, and additional securities or industry analysts do not commence coverage of our company, the trading price for our stock would be negatively impacted. If one or more of the analysts who covers us downgrades our stock, our stock price would likely decline. If one or more of these analysts ceases to cover us or fails to regularly publish reports on us, interest in our stock could decrease, which could cause our stock price or trading volume to decline.

#### **Item 1B. Unresolved Staff Comments**

None.

#### **Item 2. Properties**

We lease approximately 2,188 square feet of office space located at 525 University Avenue, Palo Alto, California under a sub-lease for general office purposes that commenced on October 10, 2013 and will terminate on December 31, 2016.

Following the Merger, our clinical development operations were moved to 8,126 square feet of office space located at 5001 South Miami Boulevard, Durham, North Carolina. In June 2015, we amended the lease for this facility by extending term of the lease through January 31, 2017.

We believe that our facilities are suitable and adequate for our current needs and that suitable additional or alternative space will be available in the future on commercially reasonable terms.

**Item 3. Legal Proceedings**

We are not currently subject to any material legal proceedings.

**Item 4. Mine Safety Disclosures**

Not applicable.

## PART II.

### Item 5. Market For Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock commenced trading on the NASDAQ Global Market on July 16, 2013 under the symbol "OCRX" following the reverse merger with Tranzyme, Inc. and currently trades on the NASDAQ Global Select Market under the same symbol. The following table sets forth the high and low per share sale prices of our common stock as reported on the NASDAQ Global Select Market during each of the previous eight quarters.

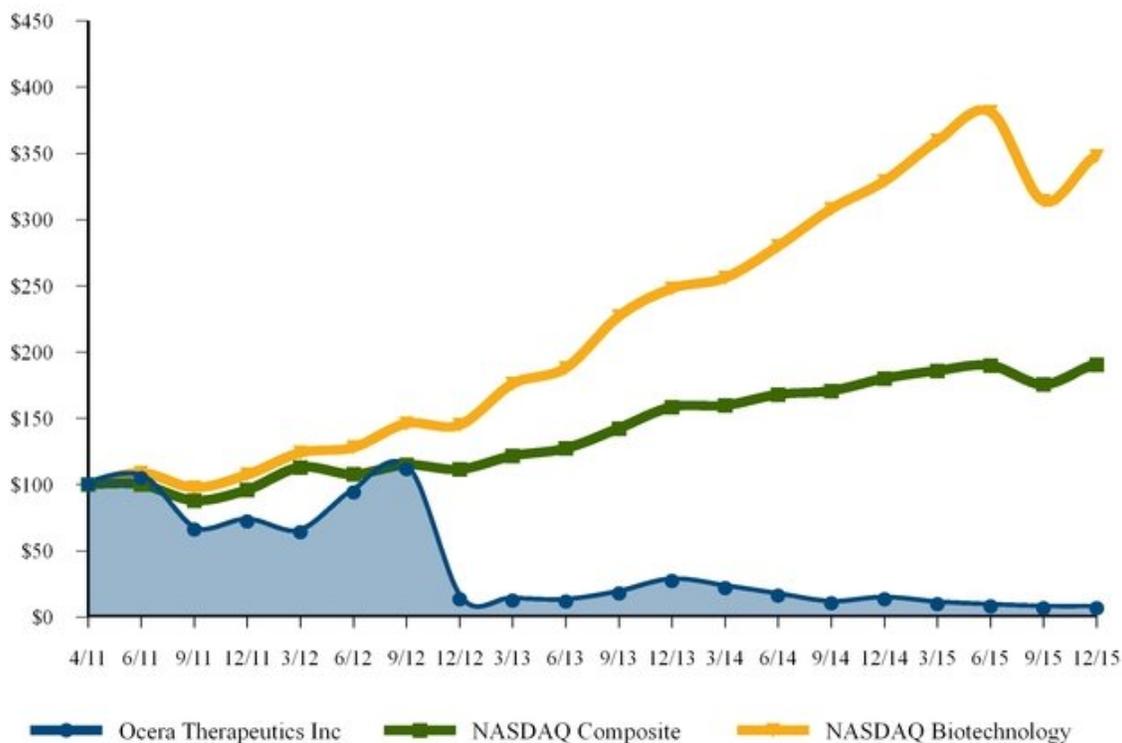
<b>Fiscal year ending December 31, 2015</b>	<b>Price Range</b>	
	<b>High</b>	<b>Low</b>
1st Quarter	\$7.24	\$4.20
2nd Quarter	\$4.69	\$3.35
3rd Quarter	\$4.68	\$3.00
4th Quarter	\$3.98	\$2.86
<b>Fiscal year ending December 31, 2014</b>		
1st Quarter	\$18.76	\$10.55
2nd Quarter	\$11.12	\$6.80
3rd Quarter	\$7.69	\$4.71
4th Quarter	\$7.94	\$4.96

On March 10, 2016, the last trading day prior to March 11, 2016, the closing price for our common stock as reported by the NASDAQ Global Market was \$3.52.

## Comparative Stock Performance Graph

The graph below matches our cumulative 56 month total shareholder return on common stock with the cumulative total returns of the NASDAQ Composite index and the NASDAQ Biotechnology index. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from April 4, 2011 to December 31, 2015. Performance from April 4, 2011 through July 15, 2013 represents Tranzyme, symbol "TZYM" on the NASDAQ Global Market and from July 16, 2013 through December 31, 2015 represents Ocera Therapeutics, Inc., symbol "OCRX" on the NASDAQ Global Market.

**COMPARISON OF 56 MONTH CUMULATIVE TOTAL RETURN\***  
Among Ocera Therapeutics Inc., the NASDAQ Composite Index, and the NASDAQ Biotechnology Index



\*\$100 invested on 4/4/11 in stock or 3/31/11 in index, including reinvestment of dividends.

### Fiscal year ending December 31:

	4/11	6/11	9/11	12/11	3/12	6/12	9/12	12/12	3/13	6/13	9/13	12/13	3/14	6/14	9/14	12/14	3/15	6/15	9/15	12/15
Ocera Therapeutics Inc	\$100	\$105	\$66	\$72	\$64	\$94	\$112	\$14	\$13	\$12	\$18	\$27	\$22	\$16	\$10	\$13	\$10	\$8	\$7	\$7
NASDAQ Composite	\$100	\$100	\$88	\$96	\$114	\$109	\$116	\$113	\$123	\$129	\$144	\$159	\$161	\$169	\$172	\$181	\$186	\$190	\$176	\$191
NASDAQ Biotechnology	\$100	\$109	\$98	\$108	\$125	\$130	\$148	\$147	\$179	\$191	\$232	\$253	\$261	\$285	\$314	\$335	\$360	\$381	\$314	\$348

### Holders of Record

As of February 29, 2016, there were approximately 62 holders of record of our common stock, one of which is Cede & Co., a nominee for Depository Trust Company, or DTC. All of the shares of common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC, and therefore, are considered to be held of record by Cede & Co. as one stockholder.

**Dividends**

We have not paid any cash dividends on our common stock since inception and do not anticipate paying cash dividends in the foreseeable future and any future indebtedness that we may incur could preclude us from paying dividends.

**Securities Authorized for Issuance under Equity Compensation Plans**

Information about our equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report on Form 10-K.

## Item 6. Selected Consolidated Financial Data

The following selected consolidated financial data have been derived from our audited consolidated financial statements and should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K. The information set forth below is historical and is not necessarily indicative of our results of future operations.

	Years Ended December 31,				
	2015	2014	2013	2012	2011
	(in thousands, except share and per share amounts)				
<b>Consolidated Statements of Operations Data:</b>					
Revenue:					
Licensing revenue	\$ —	\$ 200	\$ —	\$ —	\$ —
Royalty revenue	133	141	85	—	—
Total revenue	133	341	85	—	—
Operating expenses:					
Research and development	15,977	14,945	3,549	1,642	3,045
General and administrative	10,321	9,910	8,500	1,739	1,985
Amortization of intangibles	171	164	295	—	—
Impairment of intangibles	—	—	3,070	—	—
Total operating expenses	26,469	25,019	15,414	3,381	5,030
Other income (expense), net	(413)	54	(160)	(227)	303
Net loss from continuing operations	(26,749)	(24,624)	(15,489)	(3,608)	(4,727)
Net income (loss) from discontinued operations	227	1,199	(2,025)	—	—
Net loss	\$ (26,522)	\$ (23,425)	\$ (17,514)	\$ (3,608)	\$ (4,727)
Net loss per share from continuing operations— <i>basic and diluted</i>	\$ (1.33)	\$ (1.41)	\$ (2.52)	\$ (5.76)	\$ (7.54)
Net income (loss) per share from discontinued operations— <i>basic and diluted</i>	0.01	0.07	(0.33)	—	—
Net loss per share— <i>basic and diluted</i>	\$ (1.32)	\$ (1.34)	\$ (2.85)	\$ (5.76)	\$ (7.54)
Shares used to compute net loss per share— <i>basic and diluted</i>	20,067,660	17,525,187	6,145,731	626,593	626,593

	As of December 31,				
	2015	2014	2013	2012	2011
	(in thousands)				
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 35,921	\$ 10,127	\$ 15,533	\$ 2,303	\$ 3,114
Short and long-term investments	7,415	41,040	31,680	—	—
Working capital (deficit)	40,188	45,364	42,605	(1,054)	2,192
Total assets	44,737	53,052	51,820	2,410	3,467
Long-term notes payable	9,508	—	—	—	—
Convertible notes payable	—	—	—	2,908	—
Convertible preferred stock	—	—	—	61,743	61,743
Accumulated deficit	(131,433)	(104,911)	(81,486)	(63,972)	(60,364)
Total stockholders' equity (deficit)	31,394	50,145	45,132	(62,806)	(59,556)

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

*The following discussion and analysis of our financial condition and results of operations should be read together with our "Selected Consolidated Financial Data" and our consolidated financial statements, related notes, and other financial information included elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those described in, or implied by, the forward-looking statements. Factors that could cause or contribute to those differences include, but are not limited to, those identified below and those discussed above in the section entitled "Risk Factors."*

### Overview

We are a clinical-stage biopharmaceutical company focused on acute and chronic orphan liver diseases. Our initial focus is on the development and commercialization of a clinical candidate, OCR-002, for the treatment of hepatic encephalopathy, or HE. HE is a serious complication of liver cirrhosis, or liver failure, marked by mental changes including confusion, impaired motor skills, disorientation in time and space, and, in its more severe form, stupor, coma and even death. Although the exact cause of HE is not completely understood, there is growing evidence that elevated ammonia is a primary driver of HE, and that lowering ammonia may be beneficial to patients suffering from HE. Common causes of liver malfunction leading to elevated ammonia levels and HE include alcoholism, viral hepatitis and autoimmune diseases, non-alcoholic steatohepatitis, or NASH, as well as obesity, Type II diabetes, and acetaminophen overdose.

OCR-002 is a novel molecule, ornithine phenylacetate, which functions as an ammonia scavenger. In pre-clinical studies, OCR-002 significantly reduced arterial ammonia and cerebral edema in an animal model of chronic liver disease and significantly attenuated arterial ammonia, extracellular brain ammonia and intracranial pressure in a second animal model of acute liver failure.

We are currently conducting a randomized, placebo-controlled double blind Phase 2b clinical trial to evaluate the safety and efficacy of intravenous administration of OCR-002 in reducing the severity of HE symptoms among hospitalized HE patients. In March 2015, an independent data monitoring committee, or DMC, conducted an interim analysis, reporting that the trial was not futile and that no clinically significant safety concerns were observed. In addition, the DMC recommended that we continue the trial and increase target enrollment from 140 patients to approximately 230 patients. This sample size recommendation allows the trial to maintain 80% statistical power to observe the treatment effect at the conclusion of the trial that was observed by the DMC at the time of the interim analysis. As of February 29, 2016, approximately 150 patients have been enrolled in total. We expect to complete enrollment in the fourth quarter of 2016.

We are also developing an oral form of OCR-002 with the goal of providing continuity of care for HE patients post discharge in order to prevent subsequent episodes of acute HE. In the fourth quarter of 2015, we completed a Phase 1 clinical trial with oral formulations of OCR-002 in healthy subjects. This open label, single-dose, five treatment, five-period crossover trial evaluated the PK, safety and tolerability of three prototype, extended-release oral formulations of OCR-002 compared to an immediate release oral solution of OCR-002 and the FDA approved ammonia-lowering agent, glycerol phenylbutyrate (RAVICTI®). Glycerol phenylbutyrate is a pre-pro-drug of phenylacetate, or PAA, a component of OCR-002. The results of this trial demonstrated a robust, extended-release pattern for all three pilot OCR-002 extended-release formulations, with mean plasma phenylacetate concentrations exceeding those achieved with RAVICTI® at all time points for at least 12 hours post-dose. In addition, the concentration of phenylacetylglutamine, or PAGN, the end-product responsible for clearing ammonia, was greater in both plasma and urine for all three OCR-002 extended-release dosage forms than RAVICTI® at an approximately equivalent molar PAA dose. Based on the strength of these results and the prior clinical proof of concept established with RAVICTI® in preventing recurrent HE in patients suffering from liver cirrhosis and a prior history of HE, we plan to continue development of oral OCR-002 and expect to conduct additional Phase 1 testing in the second half of 2016 after further formulation optimization.

In 2012, we completed a Phase 1 pharmacokinetic and safety clinical trial of the intravenous form of OCR-002. A Phase 2a investigator-sponsored trial in Spain evaluated OCR-002 in patients with upper gastrointestinal bleeding associated with liver cirrhosis. These patients tend to have elevated ammonia levels because they swallow blood, which produces more ammonia as it is digested. In the first part of this trial, a 10-patient open label safety cohort, OCR-002 was shown to lower ammonia when administered as a continuous intravenous infusion of up to 10 grams per 24 hours. In February 2015, we announced the preliminary topline results of the second part of this trial, which was a randomized, placebo-controlled cohort of 38 patients. The data showed that over the first 12 hours of dosing, OCR-002 lowered ammonia by 19.6% compared to 3.2% in the placebo group, but this difference did not reach statistical significance. A statistically significant difference in urinary excretion of ammonia, as measured by PAGN, was observed and OCR-002 demonstrated a favorable safety profile and appeared to be well tolerated.

In addition, there is an investigator-sponsored Phase 2a clinical trial being conducted by the National Institutes of Health, or NIH, to evaluate the safety of OCR-002 in patients with hyperammonemia and HE due to acute liver failure or injury.

Our strategy is to focus clinical development activities on the intravenous form of OCR-002 to treat acute HE in hospitalized patients and on the oral form of OCR-002, which will be directed to chronic care of HE patients.

### ***Merger***

On July 15, 2013, Tranzyme, Inc., or Tranzyme, completed its merger, or the Merger, with Ocera Therapeutics, Inc., a privately held Delaware corporation, or Private Ocera, in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of April 23, 2013, or the Merger Agreement, by and among Tranzyme, Private Ocera and Terrapin Acquisition, Inc., a wholly-owned subsidiary of Tranzyme, or the Merger Subsidiary. Pursuant to the Merger Agreement, Merger Subsidiary merged with and into Private Ocera, with Private Ocera, renamed as Ocera Subsidiary, Inc., surviving the merger as a wholly-owned subsidiary of the combined company. Immediately following the Merger, the combined company changed its name from “Tranzyme, Inc.” to “Ocera Therapeutics, Inc.”

In connection with the Merger, on July 15, 2013, Tranzyme, Inc. effected a 12-to-1 reverse stock of its outstanding common stock. As a result of the Merger and after giving effect to a 12-to-1 reverse stock split, each outstanding share of Private Ocera's common stock was converted into the right to receive approximately 0.11969414 shares of our common stock. At the effective time of the Merger, the terms of each of Private Ocera's options and warrants were assumed by us and each outstanding option to purchase Private Ocera's common stock and warrant to purchase Private Ocera's common stock was converted into an option or warrant to purchase our common stock, respectively. No fractional shares of our common stock were issued in connection with the Merger. Instead, Ocera stockholders received cash in lieu of any fractional shares of our common stock such stockholders would otherwise be entitled to receive in accordance with the Merger Agreement.

### ***Restructuring of Canadian Operations and Sale of Related Assets***

In September 2013, we approved a restructuring plan related to Tranzyme Pharma, Inc., our former Canadian subsidiary acquired in the Merger that previously housed the research operations of Tranzyme, or Tranzyme Pharma, including Tranzyme's proprietary chemistry technology platform, MATCH (Macrocyclic Template Chemistry), used to develop its pre-clinical and clinical stage product candidates. The goal of the restructuring plan was to enable us to focus management and financial resources on advancing OCR-002. In November 2013, we terminated most employees at the Canadian location except those needed for final closure of the facility. In December 2013, we entered into a Technology Transfer and License Agreement with Genentech, Inc., or Genentech, and F. Hoffman-La Roche, Ltd, or Roche, including the Research and Early Development arms of both Genentech and Roche, for rights to the MATCH discovery platform. In 2014, we transferred ownership of equipment and materials stipulated under this agreement, and in aggregate have received payments totaling \$4.0 million in conjunction with the agreement. In connection with the completion of the transfer we recognized a gain of \$1.1 million during the year ended December 31, 2014. On December 14, 2015 Tranzyme Pharma was legally dissolved.

### ***Financings***

On July 30, 2015, we entered into a Loan and Security Agreement, or the Loan Agreement, with Oxford Finance LLC and Silicon Valley Bank, or SVB, or collectively, the Lenders. The Loan Agreement provides up to \$20 million principal in new term loans, \$10 million of which was funded on July 30, 2015. The remaining \$10 million is available for draw until December 31, 2016 at our discretion, subject to achievement of certain financial and clinical milestones. We refer to this facility as the Term Loan Facility.

On May 15, 2015, we filed a shelf registration statement on Form S-3 (File No. 333-204214) under which we may offer shares of our common stock and preferred stock, various series of warrants to purchase common stock or preferred stock and debt securities, either individually or in units, in one or more offerings, up to a total dollar amount of \$150.0 million. On May 15, 2015, we entered into a Sales Agreement, or the Sales Agreement, with Cowen and Company, LLC, or Cowen, pursuant to which we may issue and sell shares of our common stock for which we included a prospectus to our shelf registration statement on Form S-3, having aggregate sales proceeds of up to \$25.0 million from time to time, through an “at the market” equity program under which Cowen acts as sales agent. During the year ended 2015, we sold an aggregate of 946,497 shares of common stock under the Sales Agreement, at an average price of approximately \$3.95 per share for gross proceeds of \$3.74 million and net proceeds of \$3.45 million after deducting commissions and other transactions costs. As of December 31, 2015, \$21.26 million of common stock remained available to be sold under the Sales Agreement, subject to certain conditions specified therein. In February 2016, we sold an aggregate of 600,000 shares of common stock under the Sales Agreement, at an average price of approximately \$3.00 per share, for gross proceeds of approximately \$1.8 million.

On July 10, 2014, we completed an underwritten public offering of our common stock with Stifel, Nicolaus & Company, Incorporated and Cowen, as representatives of the several underwriters, in which 4,200,000 shares of common stock were sold. The aggregate gross proceeds from the offering were \$25.2 million. After deducting underwriters' discounts and commissions and offering expenses, the aggregate net proceeds received totaled approximately \$23.4 million. The common stock was offered and sold pursuant to a base prospectus dated May 29, 2012 and a preliminary prospectus supplement filed with the U.S. Securities and Exchange Commission, or SEC, on July 9, 2014, in connection with a takedown from our prior shelf registration statement on Form S-3 (File No. 333-181215), which expired and was replaced in May 2015. We have used and expect to continue to use the net proceeds from the offering to continue our clinical development of OCR-002 and for working capital and other general corporate purposes.

On November 8, 2013, we closed on a private placement financing contemplated by the Securities Purchase Agreement, or the Agreement, dated as of November 5, 2013 by and among the entities affiliated with Vivo Capital, Venrock, Deerfield Management, Great Point Partners, QVT Financial, RA Capital Management, InterWest Partners, Three Arch Opportunities Fund and certain other purchasers identified therein, or the Purchasers, pursuant to which we issued an aggregate of 3,940,887 units, or Units, for an aggregate purchase price of \$28.0 million. Each Unit consisted of one share of our common stock and a warrant to acquire 0.20 shares of our common stock at an exercise price of \$7.663 per share, or Warrants. The Units consist of an aggregate of 3,940,887 shares of common stock, or the Shares, and Warrants exercisable for an aggregate of 788,177 shares of our Common Stock, or the Warrant Shares. Concurrently with the execution of the Agreement, we entered into a Registration Rights Agreement that granted customary registration rights to the Purchasers. On December 6, 2013, we filed a registration statement registering the resale of the Shares and Warrant Shares subject to this private placement, which registration statement was declared effective on December 16, 2013.

On April 23, 2013, concurrently with the execution of the Merger Agreement, Tranzyme entered into a Securities Purchase Agreement with certain former Private Ocera stockholders and their affiliates and a Registration Rights Agreement that granted customary registration rights to the participants of the Financing. Pursuant to the Securities Purchase Agreement, immediately following the consummation of the Merger, in July 2013, we sold 3,317,976 shares of common stock. The aggregate gross proceeds received were \$20.0 million at a per share purchase price of \$ 6.0264 .

### ***Licensing***

In December 2008, we licensed rights to OCR-002 from UCL Business PLC, an entity affiliated with the University College London, or UCL, for the exclusive worldwide rights to develop and commercialize OCR-002 and related technologies for any use. The agreement was amended in July 2011, February 2013 and July 2015. As consideration for the license, we paid an up-front fee of \$1.0 million. We may be required to make future milestone payments to UCL totaling up to \$20.0 million upon the achievement of various milestones related to clinical and regulatory events for OCR-002. We may also be required to pay milestone payments totaling up to \$35.0 million upon the achievement of various milestones related to future net sales of OCR-002. We are also obligated to pay tiered royalties in the low to mid-single digits on future net sales of the licensed product candidate.

### **Critical Accounting Policies and Estimates**

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. On a regular basis we evaluate and review the accounting policies, estimates, assumptions and judgments to ensure that our financial statements are presented fairly and in accordance with GAAP. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the following accounting estimates are the most critical to aid in fully understanding and evaluating our reported financial results, and they require our most difficult, subjective or complex judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain.

#### ***Clinical Trial Accruals***

As part of the process of preparing financial statements, we are required to estimate clinical trial accruals. This process involves communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced.

or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our clinical trial accruals as of each balance sheet date in our financial statements based on facts and circumstances known to us. We periodically confirm the accuracy of our estimates with selected service providers and make adjustments, if necessary. To date, we have not adjusted our estimate at any particular balance sheet date by any material amount.

We base our expenses related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates.

### ***Fair Value Measurements***

The carrying amounts of certain of our financial instruments, including cash and cash equivalents and short-term investments, are stated at fair value. We account for the fair value of our financial instruments in accordance with the provisions of the *Fair Value Measurement* topic of the Financial Accounting Standards Board Codification, or the Codification.

Fair value is the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. We apply the market approach valuation technique for fair value measurements on a recurring basis and attempt to maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. All of our cash equivalents and short-term investments are measured using inputs classified at Level 1 or Level 2 within the fair value hierarchy. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Level 3 inputs are unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Where applicable, these models project future cash flows and discount the future amounts to a present value using market-based observable inputs obtained from various third-party data providers, including but not limited to, benchmark yields, interest rate curves, reported trades, broker/dealer quotes and market reference data.

### ***Stock-Based Compensation***

The provisions of the *Compensation - Stock Compensation* topic of the Codification establish accounting for stock-based awards exchanged for employee services. In accordance with the topic, stock-based compensation cost is measured on the grant date, based on the fair value of the award, and is recognized as expense over the requisite employee service period.

We estimate the fair value of stock options using a Black-Scholes valuation model which require the input of highly subjective assumptions, including the option's expected life and the price volatility of the underlying stock. We have opted to use the simplified method for estimating the expected term for stock options with standard term as provided by the Securities and Exchange Commission, or SEC. The simplified method calculates the expected term as the average time-to-vesting and the contractual life of the options. The expected stock price volatility assumption was determined by examining the historical volatilities of a group of industry peers. The fair value of each option grant is estimated on the date of grant using the Black-Scholes option valuation model, and the resulting charge is expensed using the straight-line attribution method over the vesting period. The Black-Scholes option-pricing model was developed for use in estimating the fair value of short-lived, exchange-traded options that have no vesting restrictions and are fully transferable.

### ***Discontinued Operations***

On September 11, 2013, our Board of Directors approved a restructuring plan related to the operations of our Sherbrooke, Quebec facility whereby we closed the operations of the facility effective as of November 11, 2013. On December 13, 2013, we entered into a Technology Transfer and License Agreement to sell our MATCH discovery platform and license the related intellectual property rights. As the Sherbrooke, Quebec operations and MATCH discovery platform comprise a component with distinct operations and cash flows that will be eliminated from ongoing operations and we will not have significant involvement after the disposal, this component will be accounted for as discontinued operations. The results of operations of the components to be disposed of, related restructuring costs and gain on disposal of assets have been classified as net income (loss) from discontinued operations from their acquisition on July 15, 2013 through December 31,

2014. The assets and liabilities of Tranzyme Pharma have been classified as assets and liabilities, respectively, of discontinued operations. On December 14, 2015 Tranzyme Pharma was legally dissolved.

### **Revenue Recognition**

We recognized revenues from the delivery of collaborative research services, license agreements for the development and commercialization of products and from royalties. During 2013, collaboration research revenue was disclosed as discontinued operations in our Consolidated Statements of Operation and Comprehensive Loss. For each source of revenue, we apply revenue recognition criteria in the following manner:

Multiple element arrangements such as collaboration agreements which may include an upfront license and ongoing services are analyzed to determine whether the deliverables within the agreement can be separated or whether they must be accounted for as a single unit of accounting. Deliverables under the agreement will be accounted for as separate units of accounting provided that (i) a delivered item has value to the customer on a stand-alone basis; and (ii) if the agreement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in the control of the vendor. The allocation of consideration amongst the deliverables under the agreement is derived using a "best estimate of selling price" if vendor specific objective evidence and third-party evidence of fair value is not available. If the delivered element does not have stand-alone value, the arrangement is then accounted for as a single unit of accounting, and we will recognize the consideration received under the arrangement as revenue on a straight-line basis over the estimated period of performance.

License fees from our license agreements are recognized when the amounts are earned and determinable during the applicable period. We recognize up-front nonrefundable license fees when due under contractual agreements and when we do not have a continuing obligation to provide services related to the agreement. Revenue associated with nonrefundable up-front license fees under arrangements where the license fees and research and development activities cannot be accounted for as separate units of accounting is deferred and recognized as revenue on a straight-line basis over the expected term of our continued involvement in the research and development process.

We recognize royalties as revenue when earned. At the end of each accounting period, estimates of royalty amounts due are made based on estimated sales information from customers.

### **Income Taxes**

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, we determine deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

We recognize deferred tax assets to the extent that we believe that these assets are more likely than not to be realized. In making such a determination, we consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If we determine that we would be able to realize our deferred tax assets in the future in excess of their net recorded amount, we would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of tax benefit might change as new information becomes available.

We record uncertain tax positions in accordance with ASC 740, *Income Taxes* on the basis of a two-step process in which (1) we determine whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

### **Recent Accounting Pronouncements**

Occasionally, new accounting standards are issued or proposed by the Financial Accounting Standards Board, or the FASB, or other standards-setting bodies that we adopt by the effective date specified within the standard. Unless otherwise discussed, standards that do not require adoption until a future date are not expected to have a material impact on our financial statements upon adoption.

In April 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-08, *Presentation of Financial Statements (Topic 205) and Property, Plant and Equipment (topic 360); Reporting Discontinued Operations and Disclosures*

*of Disposals of Components of an Entity*. ASU 2014-08 provides additional requirements to classify a disposal of a component of an entity or a group of components of an entity in discontinued operations only if the disposal represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results. The guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2014, with an option for early adoption. We adopted this guidance at the beginning of our first quarter of fiscal year 2015.

In May 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard will become effective for us on January 1, 2017. Early application is not permitted. The standard permits the use of either the retrospective or cumulative effect transition method. We are evaluating the effect that ASU 2014-09 will have on our consolidated financial statements and related disclosures. We have not yet selected a transition method nor have determined the effect of the standard on our ongoing financial reporting.

In June 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-10, *Development Stage Entities (Topic 915)*. ASU 2014-10 removes the distinction between development stage entities and other reporting entities in U.S. GAAP and eliminates the requirement to label financial statements as those of a development stage entity and eliminates the requirement to present inception to date information in the statements of income, cash flows and shareholder equity. The guidance is applied retroactively and is effective for fiscal years, and interim periods within those years, beginning after December 15, 2014, with an option for early adoption. We early adopted this guidance in 2014, and as a result, have removed the label "A Development Stage Company" from our financial statements and accompanying notes and eliminated the inception to date information from the Consolidated Statements of Operations and Comprehensive Loss and Consolidated Statements of Cash Flows. Other than presentation, the adoption of this standard did not have a material impact on our financial statements.

In August 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. ASU 2014-15 requires management to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today's guidance. ASU 2014-15 is effective for us in the first quarter of 2016 with early adoption permitted. We do not believe the impact of adopting this standard will be material on our financial statements.

In April 2015, the FASB issued Accounting Standard Update 2015-03, *Simplifying the Presentation of Debt Issuance Costs*, which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. The recognition and measurement guidance for debt issuance costs are not affected by this guidance. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. We have chosen to early adopt this guidance and present the legal costs in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount.

In November 2015, the FASB issued Accounting Standards Update 2015-17, *Income Taxes*, which requires deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position. The new accounting guidance is effective for annual reporting periods beginning after December 15, 2016 and interim periods therein. Early adoption is permitted for all entities as of the beginning of interim or annual reporting periods. We have chosen to early adopt and have classified all of our deferred tax assets and liabilities, along with our valuation allowance as noncurrent on the balance sheet. We applied the standard prospectively and did not retrospectively adjust any prior periods.

In February 2016, the FASB issued Accounting Standards Update 2016-02, *Leases*, to increase transparency and comparability among organizations by requiring recognition of lease assets and lease liabilities on the balance sheet and disclosure of key information about leasing arrangements. The standard will become effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. The guidance is required to be adopted at the earliest period presented using a modified retrospective approach. We are currently evaluating the impact the provisions will have on our consolidated financial statements and whether we will adopt the guidance early.

## Results of Operations

Comparison of the Year Ended December 31, 2015 to the Year Ended December 31, 2014 (dollars in thousands):

	2015	2014	\$ Change	% Change
Revenue:				
Licensing revenue	\$ —	\$ 200	\$ (200)	(100%)
Royalty revenue	133	141	(8)	(6%)
Total revenue	133	341	(208)	(61%)
Operating expenses:				
Research and development	15,977	14,945	1,032	7%
General and administrative	10,321	9,910	411	4%
Amortization of intangibles	171	164	7	4%
Total operating expenses	26,469	25,019	1,450	6%
Total other income (expense), net	(413)	54	(467)	(865%)
Net loss from continuing operations	(26,749)	(24,624)	(2,125)	9%
Net income (loss) from discontinued operations	227	1,199	(972)	(81%)
Net loss	\$ (26,522)	\$ (23,425)	\$ (3,097)	13%

## Revenues

Royalty revenue from a licensing agreement for the year ended December 31, 2015 and December 31, 2014 was \$133,000 and \$141,000, respectively. This revenue is attributable to a license agreement, which was acquired in connection with the Merger in July 2013.

There was no licensing revenue generated for the year ended December 31, 2015. Licensing revenue for the year ended December 31, 2014 was \$200,000, consisting of an up-front nonrefundable payment for the transfer of intellectual property and materials associated with TZP-101 (*ulimorelin*) to Lyric Pharmaceuticals, Inc.

## Costs and Expenses

### Research and Development Expenses

Our research and development expenses increased by \$1.0 million, or 7%, for the year ended December 31, 2015 compared to the year ended December 31, 2014. The increase in expenses was primarily due to the increased costs associated with our development program for OCR-002, including the ongoing enrollment and site activation of our Phase 2b trial for OCR-002 and continued development of the oral formulation of OCR-002, including the completion of a Phase 1 clinical trial. These increases were partially offset by a decrease in stock compensation expense.

Our expenses related to clinical trials are based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and contract research organizations that may be used to conduct and manage clinical trials on our behalf. We generally accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we modify our estimates of accrued expenses accordingly on a prospective basis.

Due to the significant risks and uncertainties inherent in the clinical development and regulatory approval processes, we cannot reasonably estimate the cost to complete projects and development timelines for their completion. Enrollment in clinical trials might be delayed or occur faster than anticipated for reasons beyond our control, requiring additional cost and time or accelerating spending. Results from clinical trials might not be favorable, or might require us to perform additional unplanned clinical trials, accelerating spending, requiring additional cost and time, or resulting in termination of the project. Regulatory reviews can also be delayed. Process development and manufacturing scale-up for production of clinical and commercial product supplies might take longer and cost more than our forecasts. As a result, clinical development and regulatory programs are subject to risks and changes that might significantly impact cost projections and timelines. We will

need to raise additional money to advance development and commercialization of OCR-002, which may include entering into strategic alliances.

#### General and Administrative Expenses

Our general and administrative expenses increased by \$0.4 million, or 4%, for the year ended December 31, 2015 compared to the year ended December 31, 2014. The increase in general and administrative expense was primarily due to an increase in personnel costs, due to higher headcount and related expenses, and was partially offset by a decrease in our costs associated with professional fees, including legal and accounting expenses.

We expect that our general and administrative expenses may increase in the future as we expand our operating activities, maintain and expand our patent portfolio and potentially expand our infrastructure.

#### Other Income (Expense), Net

Our other income (expense) decreased by \$0.5 million for the year ended December 31, 2015 compared to the year ended December 31, 2014. This decrease was primarily due to interest accrued and amortization of debt issuance costs on notes payable related to the Term Loan Facility that closed in 2015, partially offset by interest income earned on our investment portfolio.

#### Net loss from discontinued operations

Our net income from discontinued operations was \$0.2 million for the year ended December 31, 2015 compared to \$1.2 million for the year ended December 31, 2014. This decrease of \$1.0 million was primarily due to a gain on disposal of assets of \$1.1 million related to the sale of our MATCH discovery platform to Genentech and Roche. For the year 2015, \$0.2 million of income was related to certain foreign research credits received.

#### Comparison of the Year Ended December 31, 2014 to the Year Ended December 31, 2013 (dollars in thousands):

	2014	2013	\$ Change	% Change
<b>Revenue:</b>				
Licensing revenue	\$ 200	\$ —	\$ 200	100%
Royalty revenue	141	85	56	66%
Total revenue	341	85	256	301%
<b>Operating expenses:</b>				
Research and development	14,945	3,549	11,396	321%
General and administrative	9,910	8,500	1,410	17%
Amortization of intangibles	164	295	(131)	(44%)
Impairment of intangibles	—	3,070	(3,070)	(100%)
Total operating expenses	25,019	15,414	9,605	62%
Total other income (expense), net	54	(160)	214	(134%)
Net loss from continuing operations	(24,624)	(15,489)	(9,135)	59%
Net income (loss) from discontinued operations	1,199	(2,025)	3,224	(159%)
Net loss	\$ (23,425)	\$ (17,514)	\$ (5,911)	34%

#### Revenues

Licensing revenue for the year ended December 31, 2014 was \$200,000, consisting of an up-front nonrefundable payment for the transfer of intellectual property and materials associated with TZP-101 ( *ulimorelin* ) to Lyric Pharmaceuticals, Inc. There was no licensing revenue generated for the year ended December 31, 2013.

Royalty revenue from a licensing agreement for the year ended December 31, 2014 and December 31, 2013 was \$141,000 and \$85,000 , respectively. This revenue is attributable to a license agreement, which was acquired in connection with the Merger in July 2013.

## Costs and Expenses

### Research and Development Expenses

Our research and development expenses increased by \$ 11.4 million , or 321%, for the year ended December 31, 2014 compared to the year ended December 31, 2013. The increase was due to the continued progress of our development program for OCR-002, including the ongoing enrollment and site activation of our Phase 2b trial for OCR-002, an increase in stock compensation expense related to stock option grants issued after the Merger, increased employee related costs related to additional headcount after the Merger and increased allocable facilities expense.

### General and Administrative Expenses

Our general and administrative expenses increased by \$ 1.4 million , or 17%, for the year ended December 31, 2014 compared to the year ended December 31, 2013. The increase was due primarily to an increase in stock compensation expense, professional fees, including legal and accounting expenses, and other expenses associated with our corporate governance, including directors and officer insurance and rent. These increases were partially offset by a decrease in costs related to expenses incurred in connection with the Merger, including employee severance costs.

### Amortization of intangibles

On July 15, 2013, we capitalized approximately \$5.9 million of intangible assets acquired in the Merger. \$2.2 million of these intangible assets acquired were reclassified to discontinued operations and assets held for sale during the fourth quarter of 2013. We recognized \$ 164,000 and \$295,000 for the amortization of the intangible assets for the years ended December 31, 2014 and 2013, respectively.

### Impairment of intangibles

Following the Merger, during our periodic reviews of the collaboration agreement with BMS, we determined that BMS would terminate its efforts on the development of all macrocyclic compounds , licensed to them by Tranzyme prior to the Merger, pursuant to the collaboration agreement. As a result, we recognized an impairment loss of \$3.1 million for the year ended December 31, 2013 associated with the termination of development by BMS pursuant to the collaboration agreement. No impairment loss was recorded in the year ended December 31, 2014.

### Total Other Income (Expense), Net

Our total other income (expense), net increased \$0.2 million for the year ended December 31, 2014 compared to the year ended December 31, 2013. This increase was attributable to higher average investment balances in 2014, resulting in higher interest income of \$48,000 and decrease in interest expense of \$181,000 as interest expense and amortization of debt issuance costs on convertible notes payable ceased at such date as a result of the Merger.

### Net loss from discontinued operations

During the year ended December 31, 2013, we classified our Sherbrooke, Quebec facility and related operations as discontinued operations. During the year ended December 31, 2014, we completed our obligations under the Technology Transfer and License Agreement with Genentech and Roche, and recognized a gain on disposal of assets of \$1.1 million within discontinued operations related to the subsidiary operations of Tranzyme Pharma as detailed below *(in thousands)* :

	<b>Year Ended December 31, 2014</b>
Proceeds recognized pursuant to Technology Transfer and License Agreement	\$ 4,000
Less carrying value of assets sold:	
Intangibles assets	(2,053)
Property and equipment	(356)
Goodwill	(442)
Net gain on disposal of assets	<u>\$ 1,149</u>

Licensing revenue, research and development and general and administrative reflect the operating results of our Sherbrooke, Quebec facility that were discontinued. Restructuring costs represent costs associated with the separation of employment of employees at the Sherbrooke facility and other costs related to the restructuring plan. Amortization of intangible assets relates to the MATCH discovery platform and related intangible assets held for sale at December 31, 2013. The net results of miscellaneous asset sales were recorded in other income (expense), net for each of the years ended December 31, 2014 and 2013.

The following table summarizes the results of discontinued operations for the years ended December 31, 2014 and 2013 *(in thousands)* :

	Years Ended December 31,	
	2014	2013
Revenue	\$ —	\$ 467
Expenses:		
Research and development	—	(1,134)
General and administrative	—	(220)
Amortization of intangibles	—	(187)
Restructuring settlements (charges)	68	(859)
Gain (loss) on disposal of assets	1,149	(86)
Other income (expense), net	(6)	(6)
Recognition of accumulated translation adjustments upon deconsolidation of subsidiary	(12)	—
Net income (loss) from discontinued operations	<u>\$ 1,199</u>	<u>\$ (2,025)</u>

## Liquidity and Capital Resources

### Cash Flows

The following table summarizes our cash flows for the years ended December 31, 2015, 2014 and 2013 *(in thousands)* :

	Years Ended December 31,		
	2015	2014	2013
Net cash used in continuing operating activities	\$ (20,841)	\$ (19,885)	\$ (10,988)
Net cash provided by (used in) discontinued operating activities	227	(440)	(1,006)
Net cash provided by (used in) continuing investing activities	33,205	(10,028)	(24,264)
Net cash provided by discontinued investing activities	—	1,165	3,000
Net cash provided by continuing financing activities	13,203	23,782	46,488
Net increase (decrease) in cash and cash equivalents	<u>\$ 25,794</u>	<u>\$ (5,406)</u>	<u>\$ 13,230</u>

Cash used in continuing operating activities for the year ended December 31, 2015 was primarily due to our net loss from continuing operations of \$26.7 million, which was partially offset by non-cash charges of \$4.6 million, including depreciation expense, stock-based compensation expense, the amortization of intangibles and changes in working capital of \$1.3 million. The primary use of cash in continuing operating activities for the year ended December 31, 2014 was the result of our net loss from continuing operations of \$24.6 million plus changes in working capital of \$0.7 million. These changes were partially offset by non-cash charges of \$5.5 million including depreciation expense, stock-based compensation expense, accretion of premium on investment securities and amortization of intangible assets acquired in the Merger. Cash used in continuing operating activities for year ended December 31, 2013 was primarily due to our net loss from continuing operations of \$15.5 million, partially offset by non-cash charges of \$4.0 million including depreciation expense, stock-based compensation expense and the amortization of and impairment of intangibles purchased in the Merger and changes in working capital of \$0.5 million.

Cash provided by discontinued operating activities for the year ended December 31, 2015 was due primarily to certain foreign research credits received. Cash used in discontinued operating activities for the year ended December 31, 2014 was due primarily to payment of accrued liabilities of discontinued operations. Cash used in discontinued operating activities for year ended December 31, 2013 was primarily related to our net loss from discontinued operations of \$2.0 million and offset by changes in working capital of \$0.5 million and non-cash charges of \$0.5 million including depreciation and amortization expense and the net book value of assets disposed.

Cash provided by continuing investing activities for the year ended December 31, 2015 related to \$56.6 million of investment maturities partially offset by purchases of commercial paper and corporate debt securities of \$23.3 million. Cash used by continuing investing activities for the for the year ended December 31, 2014 related to purchases of securities totaling \$41.4 million, partially offset by maturities of such investments of \$31.4 million. Cash used in continuing investing activities

for the year ended December 31, 2013 related to purchases of short-term and long-term investments of \$34.1 million and offset partially by \$7.5 million received from the Merger and maturities of short-term investments of \$2.4 million.

Cash provided by discontinued investing activities represents cash proceeds related to the Technology Transfer and License Agreement with Genentech and Roche for rights to the MATCH discovery platform and collection of other receivables.

Cash provided by continuing financing activities for the year ended December 31, 2015 related to net proceeds from issuance of notes payable related to the Term Loan Facility of \$9.7 million and proceeds from the issuance of common stock pursuant to the “at the market” equity program of \$3.5 million. Net cash provided by continuing financing activities for the year ended December 31, 2014 related to net proceeds of \$23.4 million generated from our public offering of common stock completed on July 10, 2014, as well as proceeds from the exercise of stock options of \$0.4 million. Net cash provided by continuing financing activities for the year ended December 31, 2013 related to proceeds from issuance of common stock, net of issuance costs, of \$46.4 million.

#### *Debt Facility*

On July 30, 2015, we entered into the Loan Agreement with the Lenders. The Loan Agreement provides up to \$20 million principal in new term loans, \$10 million of which was funded on July 30, 2015. The remaining \$10 million is available for draw until December 31, 2016 at our discretion, subject to achievement of certain financial and clinical milestones.

The term loan repayment schedule provides for interest only payments (i) through either February 1, 2017 or August 1, 2017 with respect to the first \$10 million of the term loans, depending on whether the remaining term loans have been funded within a certain period set forth in the Loan Agreement, and (ii) through August 1, 2017 with respect to the remaining \$10 million of term loans, in each case followed by consecutive equal monthly payments of principal and interest in arrears starting on such dates and continuing through the maturity date of August 1, 2019. The Loan Agreement provides for an interest rate equal to the greater of (i) 8.275% or (ii) the sum of the thirty-day U.S. LIBOR rate for five days prior to the funding date of the applicable term loan plus 8.085%. The Loan Agreement also provides for a final interest payment equal to 3.0% of the original principal amount of the first \$10 million in term loans and 1.325% of the original principal amount of the remaining \$10 million in term loans, or \$432,500, which is due when the term loan becomes due or upon the prepayment of the facility. We have the option to prepay the outstanding balance of the term loan in full, subject to a prepayment fee of 1% to 3% depending upon when the prepayment occurs. The Term Loan Facility matures on August 1, 2019.

The Term Loan Facility is secured by substantially all of our assets and the assets of Ocera Subsidiary, Inc., except that the collateral does not include any intellectual property held by us or our subsidiary, Ocera Subsidiary. However, pursuant to the terms of a negative pledge arrangement, we have agreed not to encumber any of the intellectual property of ours or our subsidiaries. The Loan Agreement contains customary representations, warranties and covenants by us, which covenants limit our ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses we currently engage in or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; enter into any material transactions with any affiliates, with certain exceptions; make payments on any subordinated debt; and permit certain of our subsidiaries to maintain, own or otherwise hold any material assets or conduct any business operations other than as disclosed to the Lenders. In addition, subject to certain exceptions, we and Ocera Subsidiary are required to maintain with SVB their respective primary deposit accounts, securities accounts and commodity accounts.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of our obligations under the Loan Agreement, the occurrence of a material adverse change, which is defined as a material adverse change in our business, operations, or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of the Lenders’ lien in the collateral or in the value of such collateral. In the event of default by us under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm our financial condition.

#### ***Capital Resources and Funding Requirements***

We will require additional funds to support future operations including our development activities associated with the intravenous and oral formulations of OCR-002. Our future funding requirements depend on many factors, including, but not limited to the progress, timing, scope and costs of our nonclinical studies and clinical trials including the ability to enroll

patients on a timely basis in our planned and potential future clinical trials, the time and cost necessary to respond to technological, market or governmental developments, and the cost of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights.

We expect to fund our operations with our current cash and cash equivalents and proceeds from potential additional financing transactions and possible strategic opportunities. We believe that our current cash and cash equivalents will be sufficient to fund our operations for at least the next twelve months.

On May 15, 2015, we filed a shelf registration statement on Form S-3 (File No. 333-204214) under which we may offer shares of our common stock and preferred stock, various series of warrants to purchase common stock or preferred stock and debt securities, either individually or in units, in one or more offerings, up to a total dollar amount of \$150.0 million. On May 15, 2015, we entered into the Sales Agreement, pursuant to which we may issue and sell shares of our common stock for which we included a prospectus to our shelf registration statement on Form S-3, having aggregate sales proceeds of up to \$25.0 million, from time to time, through an “at the market” equity program under which Cowen acts as sales agent. During the year ended December 31, 2015, we sold an aggregate of 946,497 shares of common stock under the Sales Agreement, at an average price of approximately \$3.95 per share, for gross proceeds of \$3.74 million and net proceeds of \$3.45 million after deducting commissions and other transactions costs. As of December 31, 2015, \$21.26 million of common stock remained available to be sold under the Sales Agreement, subject to certain conditions specified therein.

In February 2016, we sold an aggregate of 600,000 shares of common stock under the Sales Agreement, at an average price of approximately \$3.00 per share, for gross proceeds of approximately \$1.8 million.

We have based our estimates of our cash needs on a number of assumptions that may prove to be wrong, and changing circumstances beyond our control may cause us to consume capital more rapidly than we currently anticipate. For example, our OCR-002 Phase 2b clinical trial may cost more than we expect, or development of the oral formulation of OCR-002 may involve the license of proprietary technology. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidate, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials. If adequate funds are not available to us on a timely basis, or at all, we may be required to terminate or delay clinical trials or other development activities for OCR-002.

Our ability to finance operations beyond our current resources will depend heavily on our ability to fully and timely enroll patients and obtain favorable results in clinical trials of OCR-002 and to develop and commercialize OCR-002 successfully. Additional financing may not be available when we need it or may not be available on terms that are favorable to us. We may elect to raise additional funds even before we need them if the conditions for raising capital are favorable. We may seek to raise additional capital through a combination of private and public equity offerings and debt financings. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of existing stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of existing stockholders. Debt financing, as is the case with our Term Loan Facility, results in increased fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring debt, making capital expenditures or declaring dividends.

### ***Contractual Obligations***

The following table summarizes our future contractual obligations at December 31, 2015 (*in thousands*):

	Payments due by period				Total
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	
Note payable obligations, including interest (1)	\$ 828	\$ 8,281	\$ 3,261	\$ —	\$ 12,370
Operating lease obligations	\$ 379	\$ 15	\$ —	\$ —	\$ 394
Other non-cancellable commitments (2)	\$ 273	\$ —	\$ —	\$ —	\$ 273
<b>TOTAL</b>	<b>\$ 1,480</b>	<b>\$ 8,296</b>	<b>\$ 3,261</b>	<b>\$ —</b>	<b>\$ 13,037</b>

(1) Upon the occurrence of an event of default, as defined in the Loan Agreement, and during the continuance of an event of default, a default interest rate of an additional 5% will be applied to the outstanding loan balances, and the Lenders may declare all outstanding obligations immediately due and payable.

(2) Contractual obligation and commitments under clinical contracts that are non-cancellable.

We have license milestone obligation payments that are not included in the table above because the Company cannot determine when or if the payments will occur. In the normal course of business, we enter into various firm purchase commitments and other contractual obligations which are cancellable within ninety days or less and are not a part of the future contractual obligations table above.

### ***Off-Balance Sheet Arrangements***

We do not currently have, and did not have during the periods presented, any off-balance sheet arrangements, as defined under SEC rules.

## **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

### ***Foreign Currency Risk***

We have historically contracted with third-party providers to manufacture product and to conduct clinical trials and perform other research and development activities outside of the United States. While the majority of our contractual obligations are payable in United States dollars we are indirectly exposed to fluctuations in foreign currency exchange rates in connection with the liabilities incurred by us in these relationships. We do not currently hedge our exposures to foreign currency fluctuations.

### ***Market Risk***

Our cash and cash equivalents and investments as of December 31, 2015 consisted primarily of cash, money market funds and corporate debt securities. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of United States interest rates. However, because of the short-term nature of the instruments in our portfolio, a sudden change in market interest rates would not be expected to have a material impact on our financial condition and or results of operations. Additionally, as of December 31, 2015, all of our long-term notes payable were fixed-rate.

We did not hold derivative instruments intended to mitigate interest rate risk as of December 31, 2015, and we have never held such instruments in the past. If market interest rates were to increase by 100 basis points, or 1%, from December 31, 2015 levels, the fair value of our portfolio would decrease by approximately \$19,000.

**Item 8. Financial Statements and Supplementary Data**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Stockholders  
Ocera Therapeutics, Inc.

We have audited the accompanying consolidated balance sheets of Ocera Therapeutics, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2015. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Ocera Therapeutics, Inc. at December 31, 2015 and 2014 and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Ocera Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 11, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, CA  
March 11, 2016

**Ocera Therapeutics, Inc**  
**Consolidated Balance Sheets**  
(In Thousands, Except Share and Per Share Amounts)

	December 31,	
	2015	2014
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 35,921	\$ 10,127
Short-term investments, available-for-sale	7,415	37,112
Accounts receivable	59	62
Prepaid expenses and other current assets	627	970
<b>Total current assets</b>	<b>44,022</b>	<b>48,271</b>
Property and equipment, net	94	61
Long-term investments	—	3,928
Deposits	26	26
Intangible assets, net	—	171
Goodwill	595	595
<b>Total assets</b>	<b>\$ 44,737</b>	<b>\$ 53,052</b>
<b>Liabilities and stockholders' equity</b>		
Current liabilities:		
Accounts payable	\$ 701	\$ 941
Accrued liabilities	3,133	1,966
<b>Total current liabilities</b>	<b>3,834</b>	<b>2,907</b>
Notes payable	9,508	—
Other liabilities	1	—
<b>Total liabilities</b>	<b>13,343</b>	<b>2,907</b>
Commitments and contingencies (Note 14)		
Preferred stock, \$0.00001 par value, 5,000,000 shares authorized; no shares issued or outstanding at December 31, 2015 and December 31, 2014.	—	—
Common stock, \$0.00001 par value, 100,000,000 shares authorized; 20,695,160 shares issued and outstanding at December 31, 2015 and 19,747,362 shares issued and outstanding at December 31, 2014.	—	—
Additional paid-in capital	162,832	155,083
Accumulated other comprehensive loss	(5)	(27)
Accumulated deficit	(131,433)	(104,911)
<b>Total stockholders' equity</b>	<b>31,394</b>	<b>50,145</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 44,737</b>	<b>\$ 53,052</b>

See accompanying notes.

**Ocera Therapeutics, Inc.**  
**Consolidated Statements of Operations and Comprehensive Loss**  
(In Thousands, Except Share and Per Share Amounts)

	Years Ended December 31,		
	2015	2014	2013
<b>Revenue:</b>			
Licensing revenue	\$ —	\$ 200	\$ —
Royalty revenue	133	141	85
Total revenue	133	341	85
<b>Operating expenses:</b>			
Research and development	15,977	14,945	3,549
General and administrative	10,321	9,910	8,500
Amortization of intangibles	171	164	295
Impairment of intangibles	—	—	3,070
Total operating expenses	26,469	25,019	15,414
<b>Other income (expense):</b>			
Interest and other income	89	66	18
Interest and other expense	(502)	(12)	(193)
Change in fair value of warrant liability	—	—	15
Total other income (expense), net	(413)	54	(160)
Net loss from continuing operations	(26,749)	(24,624)	(15,489)
Net income (loss) from discontinued operations	227	1,199	(2,025)
Net loss	\$ (26,522)	\$ (23,425)	\$ (17,514)
<b>Net loss per share:</b>			
Net loss per share from continuing operations, basic and diluted	\$ (1.33)	\$ (1.41)	\$ (2.52)
Net income (loss) per share from discontinued operations, basic and diluted	0.01	0.07	(0.33)
Net loss per share, basic and diluted	\$ (1.32)	\$ (1.34)	\$ (2.85)
Weighted average number of shares used to compute net loss per share of common stock, basic and diluted	20,067,660	17,525,187	6,145,731
<b>Comprehensive loss:</b>			
Net loss	\$ (26,522)	\$ (23,425)	\$ (17,514)
Unrealized gain (loss) on investments	22	(30)	3
Comprehensive loss	\$ (26,500)	\$ (23,455)	\$ (17,511)

See accompanying notes.

**Ocera Therapeutics, Inc.**  
**Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (deficit)**  
(In Thousands, except shares)

	Series A Convertible		Series B Convertible		Series C Convertible		Common Stock		Additional	Other	Accumulated	Total
	Preferred Stock		Preferred Stock		Preferred Stock				Paid-In	Comprehensive	Accumulated	Stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Capital	Income (Loss)	Deficit	Equity (deficit)
Balance at December 31, 2012	1,735,565	\$ 14,346	1,029,369	\$ 11,983	2,075,390	\$ 35,414	626,593	\$ 5	\$ 1,161	\$ —	\$ (63,972)	\$ (62,806)
Restatement of par value of common stock	—	—	—	—	—	—	—	(5)	5	—	—	—
Conversion of debt to Series C preferred stock	—	—	—	—	186,218	3,187	—	—	—	—	—	—
Conversion of preferred stock to common stock	(1,735,565)	(14,346)	(1,029,369)	(11,983)	(2,261,608)	(38,601)	5,026,542	—	64,930	—	—	64,930
Shares issued in merger with Tranzyme	—	—	—	—	—	—	2,299,751	—	13,524	—	—	13,524
Issuance of common stock, net of issuance costs	—	—	—	—	—	—	7,258,863	—	46,425	—	—	46,425
Issuance of common stock upon exercise of stock options	—	—	—	—	—	—	88,465	—	63	—	—	63
Stock-based compensation expense	—	—	—	—	—	—	—	—	507	—	—	507
Net loss	—	—	—	—	—	—	—	—	—	—	(17,514)	(17,514)
Other comprehensive income	—	—	—	—	—	—	—	—	—	3	—	3
Balance at December 31, 2013	—	\$ —	—	\$ —	—	\$ —	15,300,214	\$ —	\$ 126,615	\$ 3	\$ (81,486)	\$ 45,132
Issuance of common stock, net of issuance cost	—	—	—	—	—	—	4,200,000	—	23,384	—	—	23,384
Issuance of common stock upon exercise of stock options	—	—	—	—	—	—	225,871	—	398	—	—	398
Issuance of common stock upon cashless exercise of stock options	—	—	—	—	—	—	15,673	—	—	—	—	—
Issuance of common stock upon cashless exercise of stock warrants	—	—	—	—	—	—	5,604	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	4,686	—	—	4,686
Net loss	—	—	—	—	—	—	—	—	—	—	(23,425)	(23,425)
Other comprehensive loss	—	—	—	—	—	—	—	—	—	(30)	—	(30)
Balance at December 31, 2014	—	\$ —	—	\$ —	—	\$ —	19,747,362	\$ —	\$ 155,083	\$ (27)	\$ (104,911)	\$ 50,145
Issuance of common stock, net of issuance cost	—	—	—	—	—	—	946,497	—	3,455	—	—	3,455
Issuance of common stock warrants in connection with notes payable	—	—	—	—	—	—	—	—	317	—	—	317
Issuance of common stock upon cashless exercise of stock warrants	—	—	—	—	—	—	1,301	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	3,977	—	—	3,977
Net loss	—	—	—	—	—	—	—	—	—	—	(26,522)	(26,522)
Other comprehensive income	—	—	—	—	—	—	—	—	—	22	—	22
Balance at December 31, 2015	—	\$ —	—	\$ —	—	\$ —	20,695,160	\$ —	\$ 162,832	\$ (5)	\$ (131,433)	\$ 31,394

See accompanying notes.

**Ocera Therapeutics, Inc.**  
**Consolidated Statements of Cash Flows**  
(In Thousands)

	Years Ended December 31,		
	2015	2014	2013
<b>Operating activities</b>			
Net loss	\$ (26,522)	\$ (23,425)	\$ (17,514)
Adjustments to reconcile net loss to net cash used in operating activities:			
Net (income) loss from discontinued operations	(227)	(1,199)	2,025
Depreciation	42	36	29
Loss on disposal of fixed assets	—	—	7
Amortization of intangibles	171	164	295
Stock-based compensation	3,977	4,686	507
Change in valuation of warrant liability	—	—	(15)
Impairment of intangible assets	—	—	3,070
Accretion of premium on investment securities	367	600	39
Noncash interest expense	77	—	92
Changes in operating assets and liabilities:			
Accounts receivable	3	31	45
Prepaid expenses and other assets	343	(500)	(346)
Accounts payable	(240)	(341)	14
Accrued liabilities	1,168	63	764
Net cash used in continuing operating activities	(20,841)	(19,885)	(10,988)
Net cash provided by (used in) discontinued operating activities	227	(440)	(1,006)
Net cash used in operating activities	(20,614)	(20,325)	(11,994)
<b>Investing activities</b>			
Purchases of property and equipment	(75)	(38)	(12)
Purchases of short and long-term investments	(23,322)	(41,415)	(34,116)
Sale and maturities of short-term investments	56,602	31,425	2,400
Net cash received from merger transaction	—	—	7,464
Net cash used in continuing investing activities	33,205	(10,028)	(24,264)
Net cash provided by discontinued investing activities	—	1,165	3,000
Net cash provided by (used in) investing activities	33,205	(8,863)	(21,264)
<b>Financing activities</b>			
Proceeds from the sale of common stock, net of underwriting discounts and commissions and offering expenses	3,455	23,384	46,425
Proceeds from notes payable, net	9,748	—	—
Proceeds from exercise of common stock options	—	398	63
Net cash provided by continuing financing activities	13,203	23,782	46,488
Net increase (decrease) in cash and cash equivalents	25,794	(5,406)	13,230
Cash and cash equivalents—beginning of year	10,127	15,533	2,303
Cash and cash equivalents—end of year	\$ 35,921	\$ 10,127	\$ 15,533
<b>Supplemental disclosures of cash flow information</b>			
Cash paid for interest	\$ 278	\$ —	\$ —
<b>Supplemental schedule of noncash investing and financing activities</b>			
Fair value of warrants issued in connection with notes payable	\$ 317	\$ —	\$ —
Unrealized gain (loss) on investments	\$ 22	\$ (30)	\$ 3
Reclassification of warrant liability to additional paid-in-capital	\$ —	\$ —	\$ 1
Conversion of convertible promissory note and interest to common stock	\$ —	\$ —	\$ 3,187
Conversion of convertible preferred stock to common stock	\$ —	\$ —	\$ 61,743
Common stock issued in connection with merger transaction	\$ —	\$ —	\$ 13,524

See accompanying notes.



## Notes to Consolidated Financial Statements

### 1. Description of Business and Basis of Presentation

Ocera Therapeutics, Inc. (the "Company") is a clinical stage biopharmaceutical company focused on the development and commercialization of OCR-002 (ornithine phenylacetate) for the treatment and prevention of hepatic encephalopathy ("HE"). OCR-002 is an ammonia scavenger which has been granted orphan drug designation and Fast Track status by the FDA for the treatment of hyperammonemia and resultant HE in patients with liver cirrhosis, acute liver failure and acute-on-chronic liver disease.

On July 15, 2013, Terrapin Acquisition, Inc., a Delaware corporation ("Merger Sub"), a wholly owned subsidiary of Tranzyme, Inc., a Delaware corporation ("Tranzyme"), completed its merger (the "Merger") with and into Ocera Therapeutics, Inc., a private Delaware corporation ("Private Ocera"). Private Ocera is considered the acquiring company for accounting purposes as upon completion of the Merger, Private Ocera's former stockholders held a majority of the voting interest of the combined company. In addition, upon the closing of the Merger, six of the nine members of the board of directors of the combined company were former members of the Private Ocera board of directors. Therefore, the former members of the Private Ocera board of directors possessed majority control of the board of directors of the combined company. The Merger was effected pursuant to an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"), dated as of April 23, 2013, by and among Tranzyme, Private Ocera and Merger Sub. In connection with the Merger, the combined company changed its name to Ocera Therapeutics, Inc. and the name of Private Ocera was changed to Ocera Subsidiary, Inc.

Pursuant to the Merger, Private Ocera's convertible notes payable plus accrued interest were converted to Series C convertible preferred stock at a rate of \$2.04858 per share. Immediately thereafter, all shares of Private Ocera's Series A, Series B and Series C convertible preferred stock were converted into Private Ocera common stock on a share for share basis. All such Private Ocera common stock was exchanged for Tranzyme common stock at a rate of one Private Ocera share for 0.11969414 Tranzyme shares (the "Exchange Ratio"). All share and per share amounts for all periods presented in these consolidated financial statements have been adjusted retroactively to reflect the exchange for Tranzyme shares. In addition, convertible preferred stock warrants of Private Ocera were converted into common stock warrants of Ocera Therapeutics, Inc., pursuant to the Merger, based upon the Exchange Ratio.

On December 13, 2013, the Company entered into a Technology Transfer and License Agreement with Genentech, Inc. ("Genentech") and F. Hoffman-La Roche, Ltd ("Roche") to sell certain Canadian fixed assets and materials, the MATCH technology and rights to the Genentech and Roche customer agreements and related intellectual property through licensing of patents for \$4.0 million. On February 18, 2014, the Company received the "Notice of Completion" regarding obligations pursuant to this Agreement. The "Notice of Completion" was considered a substantive performance obligation in the agreement. The Company recorded the disposition of these assets held for sale in the first quarter of 2014.

The Company's business is subject to significant risks consistent with biopharmaceutical companies seeking to develop technologies and product candidates for human therapeutic use. These risks include, but are not limited to, uncertainties regarding research and development, access to capital, obtaining and enforcing patents, receiving regulatory approval and competition with other biotechnology and pharmaceutical companies.

The Company has evaluated subsequent events and transactions for potential recognition or disclosure in the financial statements through the day the financial statements are issued.

The Company has a limited operating history and the sales and income potential of the Company's business and market are unproven. The Company has experienced net losses each year since its inception and, as of December 31, 2015, had a deficit accumulated of \$ 131.4 million. The Company anticipates that it will continue to incur net losses into the foreseeable future and will need to raise additional debt or equity capital as it continues the development and commercialization of OCR-002 and as it expands its corporate infrastructure. Based on the Company's current operating plan, the Company believes its working capital is sufficient to fund its operations through at least the next twelve months.

## **2. Summary of Significant Accounting Policies**

### **Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles in the United States ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **Principles of Consolidation**

The consolidated financial statements include the accounts of Ocera Therapeutics, Inc., and its subsidiary, Ocera Subsidiary, Inc. All significant intercompany balances and transactions have been eliminated. All amounts included in these notes to consolidated financial statements are reported in U.S. dollars, unless otherwise indicated.

### **Discontinued Operations**

On September 11, 2013, the Board of Directors approved a restructuring plan related to the operations of Tranzyme Pharma Inc. and its Sherbrooke, Quebec facility ("Tranzyme Pharma"), whereby the Company closed the operations of the facility effective as of November 11, 2013. On December 13, 2013, the Company entered into a Technology Transfer and License Agreement to sell the Company's MATCH discovery platform and license the related intellectual property rights. The Company concluded that since Tranzyme Pharma's operations and the MATCH discovery platform comprised a component with distinct operations and cash flows that would be eliminated from ongoing operations, and the Company would not have significant involvement after the disposal, these components would be accounted for as discontinued operations. The results of operations of the components to be disposed of, related restructuring costs and gain on disposal of assets have been classified as net income (loss) from discontinued operations from their date of acquisition on July 15, 2013 through December 31, 2015. The assets and liabilities of Tranzyme Pharma have been classified as assets and liabilities, respectively, of discontinued operations. Unless noted otherwise, discussion in these notes to the financial statements pertain to the Company's continuing operations. On December 14, 2015 Tranzyme Pharma was legally dissolved.

### **Segment Reporting**

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment.

### **Cash and Cash Equivalents**

Cash and cash equivalents are stated at cost, which approximates fair value. The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents include money market funds and various deposit accounts.

### **Concentration of Credit Risk**

Financial instruments that potentially subject the Company to a significant concentration of credit risk consist primarily of cash and cash equivalents and securities available-for-sale. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. However, management believes the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. Additionally, the Company has established guidelines regarding diversification of its investments and their maturities, which are designed to maintain safety and liquidity.

## Investments

The Company invests in marketable securities, primarily money market funds, commercial paper, government agency debt securities and U.S. and foreign corporate debt securities. Investments with original maturities greater than 90 days that mature less than one year from the consolidated balance sheet date are classified as short-term investments. Those investments with a maturity date greater than one year at each balance sheet date are considered to be long-term investments. The Company further classifies investments as short-term or long-term based upon whether such assets are reasonably expected to be realized in cash or sold or consumed during the normal cycle of business. As of December 31, 2015 and 2014 all investments in marketable securities were classified as available-for-sale. The Company classifies all of its investments, as available-for-sale and records such assets at estimated fair value in the consolidated balance sheets, with unrealized gains and losses, if any, reported as a component of accumulated other comprehensive income (loss) in stockholders' equity (deficit). Debt securities are adjusted for amortization of premiums and accretion of discounts and such amortization and accretion are reported as a component of interest income.

## Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. The Company uses the market approach valuation technique for fair value measurements on a recurring basis and attempts to maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. All of our cash equivalents and investments are measured using inputs classified at Level 1 or Level 2 within the fair value hierarchy. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Level 3 inputs are unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Where applicable, these models project future cash flows and discount the future amounts to a present value using market-based observable inputs obtained from various third-party data providers, including but not limited to, benchmark yields, interest rate curves, reported trades, broker/dealer quotes and market reference data. The carrying amounts of the Company's financial instruments, including cash equivalents, accounts payable and accrued liabilities, approximate fair value due to their short maturities.

## Property and Equipment, net

Property and equipment, net, are stated at cost less accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets. Useful lives generally range from three to five years.

## Intangible Assets and Goodwill

The Company recorded intangible assets and goodwill upon the Merger. Acquired intangible assets are amortized on a straight-line basis over the remaining estimated economic life of 2.5 to 5 years. The Company reviews its intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset may not be recoverable. Recoverability of an asset is measured by comparing its carrying amount to the expected future undiscounted cash flows that the asset group is expected to generate. If it is determined that the carrying amount is not recoverable, an impairment loss is recorded in the amount by which the carrying amount of the asset exceeds its fair value. The Company recorded an impairment loss of \$3.1 million in the year ended December 31, 2013 due to the termination of work by Bristol-Myers Squibb on macrocyclic compounds under the collaboration agreement. No impairment was recorded in the years ended December 31, 2014 and 2015.

The Company performs an annual qualitative assessment of its goodwill to determine if any events or circumstances exist, such as an adverse change in business climate or adverse developmental or regulatory results of OCR-002, that would indicate that it would more likely than not reduce the fair value of a reporting unit below its carrying amount, including goodwill. If events or circumstances do not indicate that the fair value of a reporting unit is below its carrying amount, then goodwill is not considered to be impaired and no further testing is required. The determination of fair value requires significant judgment and estimates. There has been no impairment of goodwill for any periods presented.

## Foreign Currency Translation

The Company's consolidated financial statements are presented in U.S. dollars. The financial statements of Tranzyme Pharma (a discontinued entity) are re-measured from the local currency to U.S. dollars, as follows: monetary assets and liabilities are translated at the exchange rate in effect at the balance sheet date and non-monetary items at

exchange rates in effect when the assets were acquired or non-monetary liabilities incurred. Revenue and expenses are translated at the average exchange rates prevailing during the period of the transaction. The gains and losses resulting from the translation of foreign currency financial statements of discontinued entity into U.S. dollars are reported in loss from discontinued operations. The translation adjustment of cash balances held in Canadian dollars are reported in interest and other expense.

### **Revenue Recognition**

The Company recognizes revenue from the delivery of collaborative research services, license agreements for the development and commercialization of products and from royalties. During 2013, collaboration research revenue is disclosed as discontinued operations in the Company's Consolidated Statements of Operation and Comprehensive Loss. For each source of revenue, the Company applies revenue recognition criteria in the following manner:

Multiple element arrangements such as collaboration agreements which may include an upfront license and ongoing services are analyzed to determine whether the deliverables within the agreement can be separated or whether they must be accounted for as a single unit of accounting. Deliverables under the agreement will be accounted for as separate units of accounting provided that (i) a delivered item has value to the customer on a stand-alone basis; and (ii) if the agreement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in the control of the vendor. The allocation of consideration amongst the deliverables under the agreement is derived using a "best estimate of selling price" if vendor specific objective evidence and third-party evidence of fair value is not available. If the delivered element does not have stand-alone value, the arrangement is then accounted for as a single unit of accounting, and the Company will recognize the consideration received under the arrangement as revenue on a straight-line basis over the estimated period of performance.

License fees from license agreements are recognized when the amounts are earned and determinable during the applicable period. The Company recognizes up-front nonrefundable license fees when due under contractual agreements and when the Company does not have a continuing obligation to provide services related to the agreement. Revenue associated with nonrefundable up-front license fees under arrangements where the license fees and research and development activities cannot be accounted for as separate units of accounting is deferred and recognized as revenue on a straight-line basis over the expected term of our continued involvement in the research and development process.

The Company recognizes royalty payments as revenue when earned. At the end of each accounting period, estimates of royalty amounts due are made based on estimated sales information from the Company's customers.

### **Clinical Trial Accruals**

As part of the process of preparing financial statements, the Company estimates its clinical trial accruals. This process involves identifying services that have been performed and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of actual cost. The Company's clinical trial accruals are based on estimates of patient enrollment and related costs at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on the Company's behalf. The Company accrues expense related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity according to the protocol. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, the Company modifies the estimates of clinical trial accruals accordingly. To date, the Company has had no significant adjustments to accrued clinical trial expenses.

The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period.

### **Stock-Based Compensation**

Stock-based compensation is recognized as an expense in the financial statements based on the grant date fair value. For awards that vest based on service conditions, the Company uses the straight-line method to allocate compensation expense to reporting periods. For performance-based stock options, the Company begins to recognize the expense when it is deemed probable that the performance-based goal will be met. The Company evaluates the probability of achieving performance-based goals at each reporting date. Stock-based compensation expense is based on awards ultimately expected to vest, and therefore the recorded expense includes an estimate of future forfeitures. Forfeitures are to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company

estimates the fair value of stock options and stock purchase rights using a Black-Scholes option pricing model which requires the input of highly subjective assumptions, including the option's expected life and the price volatility of the underlying stock. The Company generally uses the simplified method for estimating the expected term for stock options with standard terms as provided by the Securities and Exchange Commission. The simplified method calculates the expected term as the average of time-to-vesting and the contractual life of the options. The expected stock price volatility assumption was determined by examining the historical volatilities of a group of industry peers. Forfeitures are estimated using the Company's historical experience of stock options forfeited.

## **Income Taxes**

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, the Company determine deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that they believe that these assets are more likely than not to be realized. In making such a determination, it considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If it is determined that the Company would be able to realize deferred tax assets in the future in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of tax benefit might change as new information becomes available.

The Company records uncertain tax positions in accordance with ASC 740, *Income Taxes* on the basis of a two-step process in which it determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and for those tax positions that meet the more-likely-than-not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority.

## **Recent Accounting Pronouncements**

Occasionally, new accounting standards are issued or proposed by the Financial Accounting Standards Board (the "FASB"), or other standards-setting bodies that the Company adopts by the effective date specified within the standard. Unless otherwise discussed, standards that do not require adoption until a future date are not expected to have a material impact on the Company's financial statements upon adoption.

In April 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-08, *Presentation of Financial Statements (Topic 205) and Property, Plant and Equipment (topic 360); Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*. ASU 2014-08 provides additional requirements to classify a disposal of a component of an entity or a group of components of an entity in discontinued operations only if the disposal represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results. The guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2014, with an option for early adoption. The Company adopted this guidance at the beginning of our first quarter of fiscal year 2015.

In May 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard will become effective for the Company on January 1, 2017.

In June 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-10, *Development Stage Entities (Topic 915)*. ASU 2014-10 removes the distinction between development stage entities and other reporting entities in U.S. GAAP and eliminates the requirement to label financial statements as those of a development stage entity and eliminates the requirement to present inception to date information in the statements of income, cash flows and shareholder equity. The guidance is applied retroactively and is effective for fiscal years, and interim periods within those years, beginning after December 15, 2014, with an option for early adoption. The Company early adopted this guidance in 2014, and as a result, has removed the label “A Development Stage Company” from its financial statements and accompanying notes and eliminated the inception to date information from the Consolidated Statements of Operations and Comprehensive Loss and Consolidated Statements of Cash Flows. Other than presentation, the adoption of this standard did not have a material impact on the Company’s financial statements.

In August 2014, the FASB issued Accounting Standards Update, or ASU, No. 2014-15, *Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern*. ASU 2014-15 requires management to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today’s guidance. ASU 2014-15 is effective for the Company in the first quarter of 2016 with early adoption permitted. The Company does not believe the impact of adopting this standard will be material on the Company’s financial statements.

In April 2015, the FASB issued ASU 2015-03, *Simplifying the Presentation of Debt Issuance Costs*, which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. The recognition and measurement guidance for debt issuance costs are not affected by this guidance. The guidance is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. The Company has chosen to early adopt this guidance and present the debt issuance costs in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount.

In November 2015, the FASB issued Accounting Standards Update (the "ASU"), 2015-17, *Income Taxes*, which requires deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position. The new accounting guidance is effective for annual reporting periods beginning after December 15, 2016 and interim periods therein. Early adoption is permitted for all entities as of the beginning of interim or annual reporting periods. The Company has chosen to early adopt and has classified all of its deferred tax assets and liabilities, along with its valuation allowance as noncurrent on the December 31, 2015 balance sheet. The Company applied the standard prospectively and did not retrospectively adjust any prior periods.

In February 2016, the FASB issued Accounting Standards Update 2016-02, *Leases*, to increase transparency and comparability among organizations by requiring recognition of lease assets and lease liabilities on the balance sheet and disclosure of key information about leasing arrangements. The standard will become effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. The guidance is required to be adopted at the earliest period presented using a modified retrospective approach. The Company is currently evaluating the impact the provisions it will have on the consolidated financial statements and whether it will adopt the guidance early.

### 3. Fair Value Measurements

The following tables present information about the Company’s financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2015 and 2014 and indicate the fair value hierarchy of the valuation techniques utilized by the Company to determine such fair value. As a basis for categorizing inputs, the Company uses a three-tier fair value hierarchy, which prioritizes the inputs used to measure fair value from market based assumptions to entity specific assumptions:

**Level 1:** Quoted prices in active markets for identical assets or liabilities;

**Level 2:** Inputs, other than level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and

**Level 3:** Unobservable inputs that are supported by little or no market activity, which require the reporting entity to develop its own assumptions.

None of the Company's non-financial assets and liabilities is recorded at fair value on a non-recurring basis. No transfers between levels have occurred during the periods presented.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2015 are as follows (*in thousands*):

	Balance as of December 31, 2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	\$ 34,806	\$ 34,806	\$ —	\$ —
Corporate debt securities	7,415	—	7,415	—
Total assets	<u>\$ 42,221</u>	<u>\$ 34,806</u>	<u>\$ 7,415</u>	<u>\$ —</u>

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2014 are as follows (*in thousands*):

	Balance as of December 31, 2014	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds	\$ 9,171	\$ 9,171	\$ —	\$ —
Commercial paper	3,750	—	3,750	—
Corporate debt securities	36,790	—	36,790	—
Government agency debt securities	500	—	500	—
Total assets	<u>\$ 50,211</u>	<u>\$ 9,171</u>	<u>\$ 41,040</u>	<u>\$ —</u>

The following table provides the change in the fair value of Level 3 liabilities for the year ended December 31, 2013 (*in thousands*):

	Convertible Preferred Stock Warrant Liability
Balance at December 31, 2012	\$ 16
Change in fair value of warrant liability	(15)
Conversion of preferred stock warrants into common stock warrants	(1)
Balance at December 31, 2013	<u>\$ —</u>

On July 15, 2013, warrants to purchase convertible preferred stock were converted to warrants to purchase common stock eliminating the terms that caused the preferred stock warrants to be accounted for as a liability.

#### 4. Balance Sheet Components

##### Investments

The following table summarizes the Company's available for sale investments as of December 31, 2015 (*in thousands*):

	<b>Maturity (in Years)</b>	<b>Amortized Cost</b>	<b>Unrealized Gains</b>	<b>Unrealized Losses</b>	<b>Estimated Fair Value</b>
Short-term investments:					
Corporate debt securities	1 or less	7,420	—	(5)	7,415
<b>Total short-term investments</b>		<b>\$ 7,420</b>	<b>\$ —</b>	<b>\$ (5)</b>	<b>\$ 7,415</b>

At each reporting date, the Company performs an evaluation of impairment to determine if the unrealized losses are other-than-temporary. For debt securities, management determines whether it intends to sell the impaired securities, and if there is no intent or expected requirement to sell, management considers whether it is likely that the amortized cost will be recovered. The Company does not consider unrealized losses on its debt investment securities to be credit-related. These unrealized losses relate to changes in interest rates and market spreads subsequent to purchase. The Company has not made a decision to sell securities with unrealized losses and believes it is more likely than not it would not be required to sell such securities before recovery of its amortized cost. There have been no other than temporary losses recognized in earnings.

The following table summarizes the Company's available for sale investments as of December 31, 2014 (*in thousands*):

	<b>Maturity (in Years)</b>	<b>Amortized Cost</b>	<b>Unrealized Gains</b>	<b>Unrealized Losses</b>	<b>Estimated Fair Value</b>
Short-term investments:					
Commercial paper	1 or less	\$ 3,748	\$ 2	\$ —	\$ 3,750
Corporate debt securities	1 or less	33,379	—	(17)	33,362
<b>Total</b>		<b>37,127</b>	<b>2</b>	<b>(17)</b>	<b>37,112</b>
Long-term investments:					
Corporate debt securities	1 to 2	3,439	—	(11)	3,428
Government agency debt securities	1 to 2	501	—	(1)	500
<b>Total</b>		<b>3,940</b>	<b>—</b>	<b>(12)</b>	<b>3,928</b>
<b>Total investments</b>		<b>\$ 41,067</b>	<b>\$ 2</b>	<b>\$ (29)</b>	<b>\$ 41,040</b>

##### Property and Equipment, net

Property and equipment consisted of the following (*in thousands*):

	<b>Useful Life (in years)</b>	<b>December 31,</b>	
		<b>2015</b>	<b>2014</b>
Computer equipment and software	1.5 to 3 years	\$ 128	\$ 53
Office furniture and equipment	5 years	68	68
<b>Total property and equipment, gross</b>		<b>196</b>	<b>121</b>
Less: accumulated depreciation		(102)	(60)
<b>Total property and equipment, net</b>		<b>\$ 94</b>	<b>\$ 61</b>

Depreciation expense was \$ 42,000 , \$36,000 and \$29,000 for the years ended December 31, 2015 , 2014 , and 2013, respectively.

## Acquired intangible assets

The net book value of acquired intangible assets as of December 31, 2015 and 2014 were as follows (*in thousands*) :

	December 31,	
	2015	2014
<b>Customer Agreements:</b>		
Carrying value	\$ 410	\$ 410
Accumulated amortization	(410)	(239)
Intangible assets, net	\$ —	\$ 171
Weighted average remaining life (in years)	—	1.0

On July 15, 2013, the Company capitalized approximately \$5.9 million of intangible assets acquired in the Merger. In 2013, the Company recorded an impairment charge of intangible assets of \$3.1 million and additional \$2.2 million of intangible assets were reclassified to discontinued operations and assets held for sale. The Company recognized \$171,000 , \$164,000 , and \$295,000 as amortization expense on the intangible assets for the years ended December 31, 2015 , 2014 and 2013, respectively. No impairment charges were recorded in 2015 and 2014.

## Goodwill

Goodwill of \$1.1 million was recorded pursuant to the Merger. Goodwill of \$0.5 million was allocated to discontinued operations upon restructuring and disposal of Tranzyme Pharma, see Note 6. Discontinued Operations. There were no impairments to goodwill during the periods presented.

## Accrued Liabilities

Accrued liabilities were as follows (*in thousands*) :

	December 31,	
	2015	2014
Clinical trials	\$ 1,666	\$ 897
Compensation and related expenses	993	678
Professional services	319	343
Interest expense	110	—
Other	45	48
	\$ 3,133	\$ 1,966

## 5. Merger with Tranzyme

On July 15, 2013, Merger Sub, a wholly owned subsidiary of Tranzyme, completed its Merger with Private Ocera. The Merger was accounted for as a reverse merger under the acquisition method of accounting. Under the acquisition method of accounting, Private Ocera was treated as the accounting acquirer and Tranzyme was treated as the “acquired” company for financial reporting purposes as, immediately upon completion of the Merger, Private Ocera stockholders held a majority of the voting interest of the combined company. In addition, six of the nine members of the board of directors of the combined company were former members of Private Ocera board of directors. Therefore, the former members of Private Ocera board of directors possessed majority control of the board of directors of the combined company.

The purchase price for Tranzyme is as follows (*in thousands*) :

Fair value of Tranzyme shares outstanding	\$ 13,249
Fair value of vested Tranzyme stock options	275
Purchase Price	\$ 13,524

In accordance with the acquisition method of accounting, the purchase price has been allocated to the tangible and identifiable intangible assets acquired and liabilities assumed on the basis of their estimated fair values on the date of

acquisition, based on valuations performed by a third party. The Company engaged a third party valuation firm to assist management in its analysis of the fair value of assets and liabilities acquired in the Merger with Tranzyme. All estimates, key assumptions, and forecasts were either provided by or reviewed by management. While the Company chose to utilize a third party valuation firm, the fair value analysis and related valuations represent the conclusions of management and not the conclusions or statements of any third party.

The following table summarizes the preliminary determination of the purchase price to the assets acquired and liabilities assumed (*in thousands*):

	<b>Purchase Price</b>
Cash and cash equivalents	\$ 7,464
Accounts and investment tax credits receivable, net	636
Prepaid expenses and other assets	159
Fixed assets	744
Intangible assets	5,940
Goodwill	1,054
Accounts payable	(1,029)
Accrued and long-term liabilities	(1,307)
Deferred revenue	(137)
	<u>\$ 13,524</u>

As of December 31, 2013, there were \$0.3 million of intangible assets subject to amortization with a remaining life of 2.0 years. The following table includes the intangible assets identified as of the acquisition date and the estimated lives prior to impairment and reclassification to discontinued operations (*in thousands, except for useful life*):

	<b>Continuing operations</b>	<b>Discontinued operations</b>	<b>Total</b>	<b>Useful life</b>
Customer relationships	\$ 3,700	\$ 480	\$ 4,180	2.5 to 5 years
Developed technology	—	1,760	1,760	5 years
<b>Total</b>	<u>\$ 3,700</u>	<u>\$ 2,240</u>	<u>\$ 5,940</u>	

The Company believes that the historical values of Tranzyme's current assets and current liabilities approximate their fair value based on the short-term nature of such items. Tranzyme's property and equipment consists of assets whose historical cost less depreciation approximated its fair value. The identifiable intangible assets are Tranzyme's technology, which consists primarily of its intellectual property related to Tranzyme's MATCH technology, and the estimated net present value of future cash flows from collaborative agreements to be generated from the MATCH technology used in the development activities.

The collaboration agreements were valued using a risk adjusted multi-period excess earnings analysis, a form of the income approach, which incorporates the estimated future cash flows to be generated from these relationship assets. Excess earnings are the earnings remaining after deducting the market rates of return on the estimated values of contributory assets, including debt-free net working capital, tangible and intangible assets. The excess earnings are thereby calculated for each year of a multi-year projection period, factored for industry-wide probabilities of success and discounted to a present value. Accordingly, the primary components of this method consist of the determination of excess earnings and an appropriate rate of return.

The valuation of the Tranzyme's proprietary MATCH technology is based on replacement method of the cost approach that considers the cost to replace the acquired technology. The cost approach is based on the premise that a prudent investor would pay no more for an asset than its replacement or reproduction cost. The cost to replace the asset would include the cost of constructing a similar asset of equivalent utility at prices applicable at the time of the valuation analysis. The estimated fair value attributed to the developed technology is amortized over a weighted average useful life of approximately 5 years.

Goodwill is calculated as the difference between the fair value of the consideration expected to be transferred and the values assigned to the identifiable tangible and intangible assets acquired and liabilities assumed, is primarily attributable to the acquisition of an established workforce of clinical development professionals and is not deductible for tax purposes.

## 6. Discontinued Operations

On September 11, 2013, the Company announced a restructuring plan related to the operations of Tranzyme Pharma. On December 13, 2013, the Company entered into a Technology Transfer and License Agreement with Genentech and Roche to sell certain Canadian fixed assets and materials, the MATCH technology and rights to the Genentech and Roche customer agreements and related intellectual property through licensing of patents for \$4.0 million. The Company concluded that the operations of Tranzyme Pharma and related asset groups sold to Genentech and Roche were accounted for as discontinued operations as the operations and cash flows of the discontinued component and asset group were eliminated from ongoing operations of the Company and there would not be significant involvement in the component or asset group after the disposal transaction. On December 14, 2015 Tranzyme Pharma was legally dissolved.

The Company recorded the disposition of assets sold to Genentech and Roche subject to the Technology Transfer and License Agreement in the first quarter of 2014, upon receipt of a "Notice of Completion" which was considered a substantive performance obligation in the agreement. Agreement consideration of \$3.0 million was received in 2013 and was recorded as an accrued liability at December 31, 2013.

During the Year Ended December 31, 2014 the Company completed its obligations under the Technology Transfer and License Agreement with Genentech and Roche and recognized a gain on disposal of assets of \$1.1 million within discontinued operations as detailed below (*in thousands*) :

	<b>Year Ended December 31, 2014</b>
Proceeds recognized pursuant to Technology Transfer and License Agreement	\$ 4,000
Less carrying value of assets sold:	
Intangibles assets	(2,053)
Property and equipment	(356)
Goodwill	(442)
Net gain on disposal of assets	<u>\$ 1,149</u>

The results of Tranzyme Pharma and related asset groups are disclosed as discontinued operations in the Company's Consolidated Statements of Operations and Comprehensive Loss for all periods presented (*in thousands*) :

	<b>Years Ended December 31,</b>		
	<b>2015</b>	<b>2014</b>	<b>2013</b>
Revenue	\$ —	\$ —	\$ 467
Expenses:			
Research and development	—	—	(1,134)
General and administrative	—	—	(220)
Amortization of intangibles	—	—	(187)
Restructuring settlements (charges)	—	68	(859)
Gain (loss) on disposal of assets	—	1,149	(86)
Other income (expense), net	227	(6)	(6)
Recognition of accumulated translation adjustments upon deconsolidation of subsidiary	—	(12)	—
Net income (loss) from discontinued operations	<u>\$ 227</u>	<u>\$ 1,199</u>	<u>\$ (2,025)</u>

There were no assets and liabilities recorded in discontinued operations as of December 31, 2015 and 2014. Upon classification as held for disposal and discontinued operations, the assets and liabilities of Tranzyme Pharma and related asset groups were evaluated for impairment at the lower of carrying amount or fair value less disposal costs, no impairment loss was recorded. There was \$0.2 million in income recorded in discontinued operations for the twelve month period ended December 31, 2015 that relates to certain foreign research credits of Tranzyme Pharma that were collected in 2015 prior to dissolution. These foreign research credits were reserved in 2013 as collectability was not probable.

### Restructuring of Tranzyme Pharma (Sherbrooke, Quebec)

In September 2013, the Company approved a restructuring plan related to the operations of its former wholly owned subsidiary, Tranzyme Pharma Inc. at its Sherbrooke, Quebec facility (the "Sherbrooke Facility") in order to focus its management and resources on the clinical development of OCR-002. In connection with the restructuring, the Company terminated all employees at the Canadian location, exited the Sherbrooke Facility and terminated certain contractual obligations. Restructuring charges of \$0.9 million were recorded as a component of net loss from discontinued operations during the year ended December 31, 2013. During the year ended December 31, 2014, the Company paid and settled all of the remaining liabilities and recorded an adjustment related to discounts of \$68,000 on certain shipping charges related to the restructuring of Tranzyme Pharma. As of December 31, 2015 no further activities related to restructuring occurred. On December 14, 2015 Tranzyme Pharma was legally dissolved.

The following table summarizes the Company's restructuring activities during the years ended December 31, 2014 and December 31, 2013 (*in thousands*)

	Post- Employment Benefits	Moving and Shipping Costs	Operating Activities	Total
Restructuring charges	\$ 700	\$ 114	\$ 45	\$ 859
Cash payments and other settlements	(308)	(15)	(34)	(357)
Accrued restructuring at December 31, 2013	\$ 392	\$ 99	\$ 11	\$ 502
Cash payments and other settlements	(392)	(31)	(11)	(434)
Settlement of certain restructuring charges	—	(68)	—	(68)
Accrued restructuring at December 31, 2014	\$ —	\$ —	\$ —	\$ —

## 7. License Agreements and Acquired Development and Commercialization Rights

### *Kureha Corporation*

In July 2004, the Company in-licensed from Kureha Corporation ("Kureha") the technology and exclusive development and commercialization rights to its AST-120 product candidate for the treatment of liver and gastrointestinal disease for the territories of North America and Europe. The Company paid a \$1.5 million up-front fee to Kureha. In March 2008, the Company amended the license agreement, in exchange for a payment of \$0.5 million. In January 2014, the Company notified to Kureha that it had discontinued its work on AST-120, terminated the license and returned all rights to AST-120 to Kureha.

### *UCL Business PLC*

In December 2008, the Company licensed rights to OCR-002 from UCL Business PLC, an entity affiliated with the University College London ("UCL"), for the exclusive worldwide rights to develop and commercialize OCR-002 and related technologies for any use. The agreement was amended in July 2011, February 2013 and July 2015. As consideration for the license, the Company paid an up-front fee of \$1.0 million. The Company may be required to make future milestone payments to UCL totaling up to \$20.0 million upon the achievement of various milestones related to clinical and regulatory events for OCR-002. The Company may also be required to pay milestone payments totaling up to \$35.0 million upon the achievement of various milestones related to future net sales of OCR-002. The Company is also obligated to pay tiered royalties in the low to mid-single digits on future net sales of the licensed product candidate.

### *Open Biosystems, Inc.*

In October 2005, Tranzyme entered into a license and marketing agreement whereby Open Biosystems, Inc. acquired a worldwide royalty-bearing license to certain intellectual property unrelated to Tranzyme's lead product

candidates prior to the Merger and its MATCH drug discovery technology, as specified in the agreement. The Company earns royalties on annual net sales at rates that vary by licensed product category as defined in the agreement through 2017 or until the expiration date of the last-to-expire licensed patent or twelve years, whichever occurs last. Royalty revenue recognized from the licensing agreement was \$ 133,000 , \$141,000 and \$85,000 for the years ended December 31, 2015, 2014 and 2013, respectively.

#### ***Bristol-Myers Squibb Company***

In December 2009, Tranzyme entered into a two -year collaboration agreement with Bristol-Myers Squibb Company (“BMS”) to discover, develop and commercialize novel macrocyclic compounds, other than Tranzyme's product candidates and internal programs, directed against a limited number of targets of interest to BMS.

In fiscal year 2013, during the periodic reviews of the BMS collaboration agreement, the Company determined that BMS would terminate its efforts on the development of all macrocyclic compounds under development pursuant to collaboration agreement. The Company recorded an impairment charge of \$3.1 million as a result. The Company does not expect to receive any future revenue associated with this collaboration agreement.

#### ***Lyric Pharmaceuticals, Inc.***

During the year ended December 31, 2014, the Company entered into an Asset License and Purchase Agreement for the Sale and License of *ulimorelin* (“TZP-101”), the former lead compound of Tranzyme to Lyric Pharmaceuticals, Inc. (“Lyric”). Per the terms of the agreement, the Company received an up-front nonrefundable payment of \$200,000 for the transfer of intellectual property and materials associated with TZP-101 and the licensing of associated patents with no further ongoing obligations to be performed by the Company. In addition, Lyric is solely responsible for the pre-clinical and clinical development of all products arising from the further development of TZP-101.

If successful, the Company could receive future consideration as a percentage of the proceeds received by Lyric upon its sale or license to a third party, and under certain conditions, clinical and regulatory milestones totaling up to \$25.0 million plus royalty payments from potential product sales generated by TZP-101.

### **8. Net Loss Per Share**

Basic net loss per share is calculated by dividing the net loss by the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing the net loss by the weighted average number of common shares and common share equivalents outstanding for the period. Common stock equivalents are only included when their effect is dilutive. The Company’s potentially dilutive securities which include convertible preferred stock, warrants, convertible notes payable and outstanding stock options under the stock option plan, have been excluded from the computation of diluted net loss per share as their inclusion would be anti-dilutive. For all periods presented, there is no difference in the number of shares used to compute basic and diluted shares outstanding. All shares and per share amounts for all periods presented in the following table have been adjusted retroactively to reflect the exchange for Tranzyme shares. The Company has utilized the “control number” concept in the computation of diluted earnings per share to determine whether potential common stock instruments are dilutive. The control number used is income from continuing operations. The control number concept requires that the same number of potentially dilutive securities applied in computing diluted earnings per share from continuing operations be applied to all other categories of income or loss, regardless of their anti-dilutive effect on such categories.

The following table presents the computation of net loss per share (*in thousands, except share and per share data*):

	Years Ended December 31,		
	2015	2014	2013
<b>Numerator</b>			
Net loss from continuing operations	\$ (26,749)	\$ (24,624)	\$ (15,489)
Net income (loss) from discontinued operations	227	1,199	(2,025)
Net loss	<u>\$ (26,522)</u>	<u>\$ (23,425)</u>	<u>\$ (17,514)</u>
<b>Denominator</b>			
Weighted average common shares outstanding used to compute net loss per share, basic and diluted	20,067,660	17,525,187	6,145,731
<b>Net loss per share of common stock, basic and diluted:</b>			
Net loss per share from continuing operations	\$ (1.33)	\$ (1.41)	\$ (2.52)
Net income (loss) per share from discontinued operations	0.01	0.07	\$ (0.33)
Net loss per share	<u>\$ (1.32)</u>	<u>\$ (1.34)</u>	<u>\$ (2.85)</u>

Potentially dilutive securities not included in the calculation of dilutive net loss per share are as follows (*in common equivalent shares on a weighted-average basis*):

	Years Ended December 31,		
	2015	2014	2013
Convertible preferred stock	—	—	2,604,305
Convertible preferred stock warrants	—	—	11,243
Common stock warrants	972,879	938,743	259,908
Common stock options	2,208,805	1,887,130	624,511
Total	<u>3,181,684</u>	<u>2,825,873</u>	<u>3,499,967</u>

In addition to the potentially dilutive securities noted above, the Company had outstanding convertible notes payable and accrued interest that were converted into 186,217 shares of common stock upon completion of the Merger. The Company has excluded these convertible notes payable from the table above.

## 9. Debt

### Notes Payable

On July 30, 2015, the Company and Ocera Subsidiary entered into a Loan and Security Agreement (the “Loan Agreement”) with Oxford Finance LLC (“Oxford”) and Silicon Valley Bank (“SVB”) (collectively, the “Lenders”). The Loan Agreement provides for up to \$20.0 million in new term loans (the “Term Loan Facility”), \$10.0 million of which was funded on July 30, 2015. The remaining \$10.0 million is available for draw until December 31, 2016 at the Company’s discretion, subject to achievement of certain financial and clinical milestones. The milestones would be satisfied if the Company (a) has raised proceeds of at least \$15.0 million from the sale of equity securities or upfront payments from a partnership agreement and (b) achieved positive data from its ongoing Phase 2b clinical trial of OCR-002.

The annual interest rate for the initial \$10.0 million funding is 8.275% , and the interest rate for the second tranche will be fixed upon drawdown at an annual rate of the greater of 8.275% or 8.085% plus the 30-day U.S. LIBOR rate. Loan payments are interest-only until February 1, 2017, followed by 30 equal monthly payments of principal and interest through the scheduled maturity date of August 1, 2019 if the second tranche is not drawn. If the second tranche is drawn, the interest-only period continues to August 1, 2017, followed by 24 equal monthly payments. In addition, a final payment equal to 3% of the aggregate amount drawn will be due at maturity or on earlier repayment. If the Company prepays all or a portion of the loans, a prepayment fee of between 1 - 3% of the principal amount prepaid will also be due depending on the timing of the prepayment. The 30-day U.S. LIBOR rate is 0.43% at December 31, 2015 .

At the initial funding, the Company received net proceeds of \$9.7 million after fees and expenses. These fees and expenses are being accounted for as a debt discount and classified within notes payable on the Company’s balance sheet. Consistent with the early adoption of ASU 2015-3, the Company’s legal and consulting fees of \$0.3 million are presented in

the balance sheet as a direct deduction from the carrying amount of the notes liability, consistent with debt discounts. Debt discounts, issuance costs and the final payment are being amortized or accreted as interest expense over the term of the loan using the effective interest method.

In connection with the Loan Agreement, the Company agreed to issue to the Lenders warrants to purchase shares of common stock equal to 4% of the amount loaned, divided by the exercise price, which was the average closing price of the common stock for the 10 trading days prior to funding. Accordingly, in connection with the initial funding, the Company issued the Lenders warrants to purchase an aggregate of 97,680 shares at an exercise price of \$4.095 per share. The Company recorded \$0.3 million for the relative value of the warrants as a debt discount within notes payable and an increase to additional paid-in capital on the Company's balance sheet (see Note 6). The debt discount is being amortized as interest expense over the term of the loan using the effective interest method.

The Term Loan Facility is secured by substantially all of our assets and the assets of Ocera Subsidiary, Inc., except that the collateral does not include any intellectual property held by us or Ocera Subsidiary. However, pursuant to the terms of a negative pledge arrangement, the Company has agreed not to encumber any of the intellectual property of the Company or our subsidiaries. The Loan Agreement contains customary representations, warranties and covenants by the Company, which covenants limit the Company's ability to convey, sell, lease, transfer, assign or otherwise dispose of certain of our assets; engage in any business other than the businesses we currently engage in or reasonably related thereto; liquidate or dissolve; make certain management changes; undergo certain change of control events; create, incur, assume, or be liable with respect to certain indebtedness; grant certain liens; pay dividends and make certain other restricted payments; make certain investments; enter into any material transactions with any affiliates, with certain exceptions; make payments on any subordinated debt; and permit certain of the Company's subsidiaries to maintain, own or otherwise hold any material assets or conduct any business operations other than as disclosed to the Lenders. In addition, subject to certain exceptions, the Company and Ocera Subsidiary are required to maintain with SVB their respective primary deposit accounts, securities accounts and commodity accounts.

The Loan Agreement also contains customary indemnification obligations and customary events of default, including, among other things, our failure to fulfill certain of the Company's obligations under the Loan Agreement, the occurrence of a material adverse change, which is defined as a material adverse change in the Company's business, operations, or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan, or a material impairment in the perfection or priority of the Lenders' lien in the collateral or in the value of such collateral. In the event of default by the Company under the Loan Agreement, the Lenders would be entitled to exercise their remedies thereunder, including the right to accelerate the debt, upon which we may be required to repay all amounts then outstanding under the Loan Agreement, which could harm the Company's financial condition.

The Company was in compliance with all applicable covenants set forth in the Loan Agreement as of December 31, 2015.

The Company recorded interest expense related to the Term Loan Facility of \$0.5 million for the twelve months ended December 31, 2015. The annual effective interest rate on the note payable, including the amortization of the debt discounts and accretion of the final payments, is 11.72% .

Future payments under the Loan Agreement as of December 31, 2015 are as follows ( *in thousands*):

**Years ending December 31:**

2016	\$	828
2017		3,839
2018		4,442
2019		3,261
Total minimum payments		12,370
Less amount representing interest		2,370
Notes payable, gross		10,000
Unamortized discount on notes payable		(492)
Notes Payable, balance		9,508
Current portion of notes payable		—
Non-current portion of notes payable	\$	9,508

## **Convertible Notes Payable**

In March 2012, the Company entered into a convertible note and warrant purchase agreement with existing investors. The Company issued an aggregate principal amount of \$1.5 million of convertible notes in an initial closing in March 2012 (the "March 2012 Notes"). The March 2012 Notes had an interest rate of 6% per annum and had a maturity date of the earlier of (i) March 30, 2013, (ii) a change of control, or (iii) an event of default. In connection with the March 2012 Notes, the lenders received warrants to purchase 65,731 shares of the Company's common stock (the "March Warrants") at an exercise price of \$0.67 per share. The March Warrants of 26,292 shares have a seven year term expiring on March 30, 2019 and the June Warrants of 39,439 shares have a seven year term expiring on June 30, 2019.

In October 2012, the Company issued an aggregate amount of \$1.5 million of convertible notes in a second closing with existing investors (the "October 2012 Notes"). The October 2012 Notes had an interest rate of 6% per annum and had a maturity date of the earlier of (i) October 1, 2013, (ii) a change of control, or (iii) an event of default. In connection with the October 2012 Notes, the lenders received warrants to purchase 65,731 shares of the Company's common stock (the "October Warrants") at an exercise price of \$0.67 per share. The October Warrants have a seven -year term set to expire on October 1, 2019.

The common warrants issued in connection with the March 2012 Notes and October 2012 Notes became immediately exercisable at \$ 0.67 per share.

In March 2013, the Company amended the March 2012 Notes to extend the maturity date to October 1, 2013. In April 2013, the March 2012 Notes and October 2012 Notes were amended to change the note conversion date to automatically convert the unpaid principal and interest at the time of the Merger into shares of the Series C Preferred Stock of Private Ocera at the Series C Conversion Price of \$2.04858 per share. There was no consideration paid, given or committed to the note holders by the Company in exchange for the modifications. The debt modification was evaluated under ASC 470-60, *Troubled Debt Restructuring* and under ASC 470-55, *Debt Modification and Extinguishments*. The Company determined that it was appropriate to account for the term extension and change to the conversion date on a prospective basis and the carrying amount of the debt remained unchanged. All costs incurred with third parties directly related to the maturity extension were expensed as incurred. There were no costs associated with the change to the note conversion date.

On July 15, 2013, the March 2012 Notes and October 2012 Notes plus accrued interest of \$ 0.2 million were converted into 186,217 shares of common stock in connection with the Merger.

The Company recorded an aggregate of \$0.2 million of non-cash interest expense and amortization of debt discount related to the convertible notes payable for the years ended December 31, 2013.

## **Warrants**

### *Common Stock Warrants*

In connection with the \$10.0 million initial funding under the Term Loan Facility in July 2015, the Company issued warrants to purchase a total of 97,680 shares of common stock to the Lenders (See Notes Payable above). The exercise price for each warrant is \$4.095 per share. The warrants are immediately exercisable, and excluding certain mergers or acquisitions, will expire on July 30, 2025. The warrants were determined to be indexed to the Company's common stock and to meet the criteria to be classified in permanent stockholders' equity on the Company's balance sheet.

The fair value of the warrants issued was approximately \$0.3 million and was estimated using a Black-Scholes valuation model on a non-recurring basis with the following assumptions: fair value of common stock at issuance of \$3.84 ; risk-free interest rate of 2.28% based upon observed risk-free interest rates appropriate for the expected term of the warrants; expected volatility of 87% based on the average historical volatilities of a peer group of publicly-traded companies within the Company's industry; expected term of 10 years, which is the contractual life of the warrants; and a dividend yield of 0% . The allocation of proceeds to the warrants in a relative-fair-value allocation with the related notes payable was also \$0.3 million . As of December 31, 2015, all of these warrants remained outstanding and exercisable.

On July 15, 2013, warrants to purchase 19,243 shares of common stock of Tranzyme became warrants to purchase common stock of the Company in connection with the Merger.

On November 8, 2013, the Company closed on a private placement pursuant to the Securities Purchase Agreement and sold 3,940,887 shares of common stock and warrants exercisable for an aggregate of 788,177 shares of common stock for an aggregate purchase price of \$28.0 million . The warrants have a five year life at an exercise price of \$7.663 per share.

The following table summarizes the outstanding common stock warrants and the corresponding exercise price as of December 31, 2015 and 2014:

Issuance Date	Number of Warrants Outstanding at December 31		Per-Share Exercise Price	Expiration
	2015	2014		
12/3/2008	—	2,380	84.00	12/3/2015
9/30/2010	3,240	3,240	160.44	4/6/2016
1/31/2012	13,623	13,623	44.04	1/31/2022
3/30/2012	24,388	25,022	0.67	3/30/2019
6/30/2012	36,583	37,535	0.67	6/30/2019
10/1/2012	62,558	62,558	0.67	10/1/2019
11/8/2013	788,177	788,177	7.66	11/8/2018
7/30/2015	97,680	—	4.10	7/30/2025
<b>Total</b>	<b>1,026,249</b>	<b>932,535</b>		

In December 2014, 6,347 warrants were exercised at an exercise price of \$0.67 price per share in a cashless exercise with 5,604 shares of common stock being issued.

In May 2015, 1,586 warrants were exercised at an exercise price of \$0.67 price per share in a cashless exercise with 1,301 shares of common stock being issued. In December 2015, 2,380 warrants were expired and have been removed from the warrants outstanding table at December 31, 2015.

## 10. Stockholders' Equity

### Convertible Preferred Stock

Pursuant to the Merger, Private Ocera's convertible notes payable plus accrued interest were converted to Series C convertible preferred stock at a rate of \$2.04858 per share. Immediately thereafter, all shares of Private Ocera's Series A, Series B and Series C convertible preferred stock was converted into shares of Private Ocera's common stock on a share for share basis. All resultant Private Ocera common stock was exchanged for 5,026,542 shares of Tranzyme common stock at a rate of one Private Ocera share for 0.11969414 Tranzyme shares.

### Common Stock

On July 15, 2013, Private Ocera completed the Merger with Tranzyme as discussed in Note 1. Immediately prior to the effective time of the Merger, the principal and interest under Private Ocera's outstanding convertible notes converted into shares of Series C preferred stock of Private Ocera, and, immediately thereafter, all outstanding preferred stock of Private Ocera converted into the common stock of Private Ocera.

At the effective time of the Merger, each outstanding share of Private Ocera's common stock was converted into shares of Tranzyme's common stock at the Exchange Ratio, with cash paid in lieu of any fractional shares.

Pursuant to the Securities Purchase Agreement dated April 23, 2013, immediately following the consummation of the Merger, the combined company sold 3,317,976 shares of common stock for approximately \$20.0 million of its common stock to the parties at a per share purchase price of \$ 6.0264 . Issuance costs of \$26,000 were charged to additional paid-in capital.

On November 8, 2013, the Company closed on a private placement pursuant to the Securities Purchase Agreement and sold an aggregate of 3,940,887 shares of common stock and warrants to purchase an additional 788,177 shares of common stock for an aggregate purchase price of \$28.0 million . The warrants may be exercised at any time at an exercise price of \$7.663 per share and have a five year life. Issuance costs of \$1.5 million were charged to additional paid-in capital.

On July 10, 2014 the Company completed an underwritten public offering of its common stock in which 4,200,000 shares of common stock were sold for gross proceeds from the offering of \$25.2 million . Issuance costs of \$1.8 million were charged to additional paid-in capital.

On May 15, 2015, the Company entered into the Sales Agreement (the "Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which the Company may issue and sell shares of its common stock having aggregate sales proceeds of up to \$25,000,000 from time to time through an "at the market" equity program under which Cowen acts as sales agent.

During the year ended December 31, 2015, the Company sold an aggregate of 946,497 shares of common stock under the Sales Agreement, at an average price of approximately \$3.95 per share, for gross proceeds of \$3.74 million and net proceeds of \$3.45 million after deducting commissions and other transactions costs. As of December 31, 2015, \$21.26 million of common stock remained available to be sold under the Sales Agreement, subject to certain conditions specified therein.

### ***Shares Reserved for Future Issuance***

The Company has reserved shares of its common stock for future issuance as of December 31, 2015 as follows:

	<b>December 31, 2015</b>
Stock options outstanding	2,429,511
Shares available for grant under stock option plans	1,299,301
Outstanding warrants	1,026,249
<i>Total shares reserved for future issuance</i>	<u>4,755,061</u>

## **11. Stock Options**

In 2005, the Company adopted the Ocera Therapeutics, Inc. 2005 Stock Plan (the "Plan"). At the effective time of the Merger, each outstanding stock option to purchase common stock of Private Ocera under the Plan not exercised immediately prior to the effective time of the Merger, whether or not vested, was assumed by the Company and became exercisable for shares of the registrant's common stock in accordance with the terms of the Merger Agreement and the Company assumed the 2005 Plan. Upon completion of the Merger, no options remain available for future grant under the 2005 Plan.

On July 15, 2013, in connection with the Merger, the Company assumed the existing Tranzyme 2011 Stock Option and Incentive Plan (the "2011 Plan"), which authorized the issuance of 302,328 shares of common stock under the 2011 Plan.

On August 13, 2013, the Company's board of directors approved an amendment to the 2011 Plan to increase the maximum number of shares that may be issued under the 2011 Plan from 302,328 to 2,302,328 shares. In connection with this amendment, the Company's board of directors authorized the grant of 1,454,200 common stock options to its employees. On August 30, 2013, the Company's board of directors authorized the grant of 140,000 common stock options to non-employee members of the board of directors. The amendment to the 2011 Plan and the common stock option grants were subject to stockholder approval within twelve months from August 13, 2013. The amendment to the 2011 Plan was approved by stockholders on December 19, 2013. Given that the issuance of stock options granted on August 13, 2013 and August 30, 2013 options were subject to shareholder approval of the increase in the number of shares issuable to the 2011 Plan, the Company concluded the grant date for accounting purposes to be December 19, 2013, the date of shareholder approval.

On April 23, 2015, the Company's board of directors approved an amendment and restatement of the Company's 2011 Stock Option and Incentive Plan (the "2011 Plan") to, among other things, increase the maximum number of shares that may be issued under the 2011 Plan from 2,302,328 to 3,602,328 shares. The amendment and restatement of the 2011 Plan was approved by the Company's stockholders on June 18, 2015.

A summary of the Company's stock option activity and related information are as follows:

	Shares Available for Grant	Stock Options Outstanding	Weighted-avg Exercise Price Per Share	Weighted-avg Remaining Contractual Life (in Years)	Aggregate Intrinsic Value  (in thousands)
<b>Balance at December 31, 2013</b>	762,867	1,909,769	\$ 8.77	8.58	\$ 11,818
Stock options granted	(1,007,500)	1,007,500	\$ 7.44		
Stock options exercised	—	(243,824)	\$ 1.72		2,719
Stock options cancelled	586,843	(586,843)	\$ 12.13		
<b>Balance at December 31, 2014</b>	342,210	2,086,602	\$ 8.01	8.63	\$ 871
Additional shares authorized	1,300,000				
Stock options granted	(707,500)	707,500	\$ 3.73		
Stock options exercised	—	—	\$ —		
Stock options cancelled	364,591	(364,591)	\$ 6.44		
<b>Balance at December 31, 2015</b>	1,299,301	2,429,511	\$ 7.00	8.01	\$ 287
<b>At December 31, 2015:</b>					
Vested and expected to vest		2,369,996	\$ 7.04	6.89	\$ 287
Exercisable		1,057,536	\$ 8.41	6.89	\$ 287

The Company's stock options generally vest over one to four years and have a ten-year term. Stock options issued under the Plan were exercisable in advance of becoming vested. Stock options assumed in the Merger were fully vested on the date of Merger. As of December 31, 2015, no shares were subject to repurchase. At December 31, 2015, the intrinsic values of outstanding, vested and expected to vest and exercisable options were determined by multiplying the number of shares by the difference between the exercise price of the options and the fair value of the common stock. The total estimated grant date fair value of stock options vested during the years ended December 31, 2015 and 2014 is \$4.1 million. The aggregate intrinsic value of options exercised during 2015, 2014 and 2013 is \$0, \$2.7 million and \$0.6 million, respectively.

#### Stock-Based Compensation

The Company's results of operations for the years ended December 31, 2015, 2014 and 2013 included stock-based compensation expense of 4.0 million, \$4.7 million and \$0.5 million, respectively.

The Company recognized stock-based compensation expense as follows (in thousands):

	Years Ended December 31,		
	2015	2014	2013
Research and development	\$ 648	\$ 1,595	\$ 68
General and administrative	3,329	3,091	439
<b>Total</b>	<b>\$ 3,977</b>	<b>\$ 4,686</b>	<b>\$ 507</b>

The above table includes \$24,000, \$17,000 and \$88,000 of stock compensation expense for the years ended December 31, 2015, 2014 and 2013, respectively, related to stock option grants to nonemployee consultants.

## Stock Option Valuation Assumptions

The following table summarizes the average estimates the Company used in the Black-Scholes option-pricing model for the years ended December 31, 2015, 2014 and 2013 to determine the fair value of stock options granted during each period.

	Years Ended December 31,		
	2015	2014	2013
Expected dividend yield	—%	—%	—%
Risk-free interest rates	1.52% - 2.08%	1.74% - 2.01%	0.06% - 2.02%
Expected term (in years)	4.99 - 8.06	6.08 - 6.62	0.25 - 6.08
Expected volatility	76% - 92%	95% - 102%	52% - 100%

The fair value of each grant of stock options was determined by the Company using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment to determine.

**Expected Dividend** - The expected dividend assumption is based on the Company's history and expectation of dividend payouts.

**Risk-Free Interest Rate** - The risk-free rate assumption is based on the U.S. Treasury instruments the terms of which were consistent with the expected term of the Company's stock options.

**Expected Term** - The expected term of stock options represents the weighted-average period the stock options are expected to be outstanding. The Company has opted to use the simplified method for estimating the expected term as provided by the Securities and Exchange Commission. The simplified method calculates the expected term as the average time-to-vesting and the contractual life of the options. The Company's expected term for employee stock options is generally estimated to be 6.08 years. In 2014, the Company amended the non-employee director compensation policy to amend the exercise period of new awards from three months to one year following termination of services. The Company uses historical experience to estimate the expected term of awards granted with the extended exercise period. The Company's expected term for non-employee director options with the extended term is estimated to be 6.62 years. In 2015, the Company further amended the non-employee director compensation policy to amend the exercise period of all existing awards from one year to three years following termination of services. The Company's expected term for non-employee director options with the new extended term is estimated to be 8.06.

**Expected Volatility** - The expected stock price volatility assumption was determined by examining the historical volatilities of a group of industry peers. The Company will continue to analyze the historical stock price volatility and expected term assumptions as more historical data for the Company's common stock becomes available.

**Forfeiture Rate** - ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures were estimated based on historical experience.

The Company may elect to use different assumptions under the Black-Scholes option-pricing model in the future. Future expense amounts for any particular period could be affected by changes in the Company's assumptions. Authoritative literature provides that it is reasonable for a company to continue to use the simplified method of determining the expected option term when a company has insufficient historical exercise data to provide a reasonable basis to estimate the expected option term. The Company expects to continue to use the simplified method for determining its expected employee option term because there is a limited amount of historical exercise data from which to form a reasonable basis to estimate the expected term of the Company's stock options.

The Company records equity instruments issued to nonemployee as expense at their fair value over the related service period and the Company periodically revalues them each reporting period over the vesting term.

During the years ended December 31, 2015, 2014 and 2013, the gross fair value of stock options granted were \$1.8 million, \$5.7 million and \$15.8 million, respectively. As of December 31, 2015, the Company had \$7.6 million of unrecognized stock-based compensation costs which is expected to be recognized over a weighted average period of 2.22 years.

In June 2012, the Company issued 61,653 shares of common stock options to an executive. One-half of the stock options vest monthly over a one year period from the vesting commencement date. The remainder of the stock options are

performance based and would vest upon the closing of certain strategic or financing transactions. In April 2013, the terms of the stock option agreement were modified to further define the meaning of strategic or financing transactions such as the Merger Agreement. On July 15, 2013 as a result of the Merger, the performance based portion of the stock option vested and \$0.2 million of stock compensation expense was recorded for the year ended December 31, 2013.

In September 2014, the Company modified the terms of an existing stock option to an executive to extend the period of time to exercise the vested stock options from three month to one year following the termination of employment. \$51,000 of stock compensation expense was recorded pursuant to this modification.

In June and September 2014, the Company issued performance based stock options to two executives and modified an outstanding stock option agreement to accelerate vesting for a third executive based on the achievement of certain performance conditions. The performance conditions were not achieved by December 31, 2014 and the performance based awards and modified award were canceled. There was no stock compensation expense recorded for these performance based awards.

In April 2015, the Company amended the non-employee director compensation policy again to amend the exercise period of all existing awards from three months to three year following such directors' departure from the Company's board of directors. \$141,000 of stock compensation expense was recorded during the year ended December 31, 2015 pursuant to this modification.

In May 2015, the Company modified the terms of an existing stock option to a former executive to extend the period of time to exercise the vested stock options from one year to three years following the termination of employment. \$49,000 of stock compensation expense was recorded during the year ended December 31, 2015 pursuant to this modification.

In June 2015, the Company granted 50,000 common stock options to a consultant, of which 25,000 stock options will vest based on the achievement of certain clinical milestones. During the year ended December 31, 2015 no expense has been recorded for the performance based options.

## 12. Income Taxes

The following is consolidated loss before income taxes by income tax jurisdiction for continuing operations *(in thousands)* :

	Years Ended December 31,		
	2015	2014	2013
United States	\$ (26,749)	\$ (24,624)	\$ (15,489)

No provision for federal or state income taxes has been recorded, as the Company has incurred cumulative net operating losses since inception. A reconciliation of the loss from continuing operations at the federal statutory tax rate of 34% to the Company's effective income tax rate is as follows *(in thousands)*:

	Years Ended December 31,		
	2015	2014	2013
Income tax at statutory rate	\$ (9,094)	\$ (8,372)	\$ (5,267)
State income tax, net of federal benefit	693	(4,180)	(225)
Permanent items	906	1,098	516
Credits	(1,769)	(3,156)	(198)
Refinement of §382 limitation	—	—	(23,816)
Unrecognized tax benefits	—	—	1,840
Change in valuation allowance	9,264	14,610	27,150
Provision for income taxes	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

Components of the Company's deferred tax assets and liabilities for federal income tax purposes are as follows *(in thousands)*:

	Years Ended December 31,	
	2015	2014
<b>Deferred tax assets:</b>		
Net operating loss carryforwards	\$ 42,754	\$ 36,066
Credits	7,141	5,659
Equity compensation	3,162	2,121
Accrued expenses and other reserves	45	6
<b>Gross deferred tax assets</b>	<b>53,102</b>	<b>43,852</b>
Valuation allowance	(53,102)	(43,838)
<b>Net deferred tax assets</b>	<b>—</b>	<b>14</b>
<b>Deferred tax liabilities:</b>		
Fixed assets and intangibles	—	(14)
<b>Net deferred tax liabilities</b>	<b>—</b>	<b>(14)</b>
<b>Net deferred tax assets (liabilities):</b>	<b>\$ —</b>	<b>\$ —</b>

The Company has evaluated the evidence bearing upon the realizability of its net deferred tax assets including the Company's history of operating losses and has concluded that it is not more likely than not that the Company will realize the benefit of its deferred tax assets. Accordingly, the Company has recorded a full valuation allowance against its net deferred tax assets at December 31, 2015 and 2014.

Pursuant to Internal Revenue Code ("IRC") Sections 382 and 383, annual use of the Company's net operating loss and research and development credit carryforwards may be limited in the event a cumulative change in ownership of more than 50% occurs within a three-year period. As of December 31, 2015, the Company has \$111.9 million of U.S. federal net operating loss ("NOL") carryforwards and \$7.8 million of Orphan Drug Credit carryforwards, and \$2.5 million of U.S. federal research and development carryforwards available for use, all of which have a full valuation allowance and will begin to expire in 2019 unless utilized.

Not included in the deferred income tax asset balance at December 31, 2015 is approximately \$0.3 million which pertains to certain net operating loss carryforwards resulting from the exercise of employee stock options. When recognized, the tax benefit of these losses will be accounted for as a credit to additional paid-in capital rather than a reduction of the income tax provision.

As of December 31, 2015, the Company has North Carolina net economic loss carryforwards of approximately \$5.4 million, which will begin to expire in 2022 unless utilized, and \$0.09 million of research and development credits that will begin to expire in 2028 unless utilized. As of December 31, 2015, the Company has California state net operating loss carryforwards of approximately \$64.7 million, which have begun to expire as of 2015, and \$2.5 million of California research and development carryforwards that do not expire.

Additional limitations as to the ability to use net operating loss or tax credit carryforwards may arise if the Company experiences an ownership change in subsequent years.

The Company adopted accounting guidance related to accounting for uncertainty in income taxes on January 1, 2007, which prescribes a recognition threshold and measurement attribute criteria for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. As of December 31, 2015, the Company had \$4.8 million of unrecognized tax benefits. A reconciliation of the current and prior year changes to the Company's unrecognized tax benefits is as follows ( *in thousands* ):

<b>Unrecognized tax benefits as of December 31, 2012</b>	\$	—
Increases in prior period positions		1,761
Increases in current period positions		79
<b>Unrecognized tax benefits as of December 31, 2013</b>	\$	1,840
Increases in prior period positions		647
Increases in current period positions		1,286
<b>Unrecognized tax benefits as of December 31, 2014</b>	\$	3,773
Increases in prior period positions		8
Increases in current period positions		980
<b>Unrecognized tax benefits as of December 31, 2015</b>	\$	4,761

As of December 31, 2015 , no unrecognized tax benefits are included in the balance sheet that would, if recognized, affect the Company's effective tax rate due to the valuation allowance that currently offsets deferred tax assets. The Company does not anticipate the total amount of unrecognized income tax benefits will significantly increase or decrease in the next 12 months.

The Company will recognize interest and penalties related to uncertain tax positions in income tax expense. The Company determined that no accrual for interest and penalties was required as of December 31, 2015 .

The Company has not completed a formal IRC Section 382 and 383 analysis. The statute of limitations for assessment by the Internal Revenue Service ("IRS") and state tax authorities is open for tax years ended December 31, 2011 through 2015, although carryforward attributes that were generated prior to tax year 2011 may still be adjusted upon examination by the IRS or state tax authorities if they either have been or will be used in a future period. There are currently no federal or state audits in progress.

In November, 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*. The ASU requires companies to classify all deferred tax assets and liabilities, along with any related valuation allowance, as noncurrent on the balance sheet and is part of the Board's simplification initiative aimed at reducing complexity in accounting standards and. Although ASU 2015-17 is not required for public companies to implement until fiscal years beginning after December 15, 2016, early adoption is permitted. The Company has chosen to early adopt and has classified all of its deferred tax assets and liabilities, along with its valuation allowance as noncurrent on the balance sheet. The Company considers this change an improvement in the usefulness of information provided to users of the Company's financial statements. The Company applied the standard prospectively and did not retrospectively adjust any prior periods.

### 13. Retirement Savings Plan

The Company provides a qualified 401(k) savings plan for its employees. All employees are eligible to participate, provided they meet the requirements of the plan. Employee contributions are limited to a maximum annual amount as set periodically by the Internal Revenue Code. Following the Merger, the Company provides a contribution on the first 3% of an employee's eligible compensation subject to statutory limitations as proscribed by law. For the years ended December 31, 2015 , 2014 and 2013 the Company recorded \$101,000 , \$107,000 and \$58,000 of expense, respectively, associated with matching employee contributions.

### 14. Commitments and Contingencies

From time to time, the Company may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of our business. Any of these claims could subject the Company to costly legal expenses and, while the Company generally believes that it has adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on the Company's consolidated results of operations

and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business. The Company is currently not a party to any legal proceedings, the adverse outcome of which, in management's opinion, individually or in the aggregate, would have a material adverse effect on our consolidated results of operations or financial position.

### Indemnification

As permitted under Delaware law and in accordance with the Company's Bylaws and agreements entered into with the Company's officers and directors, the Company indemnifies its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity. The indemnification agreements with the Company's officers and directors terminate upon termination of their employment, but the termination does not affect claims for indemnification relating to events occurring prior to the effective date of termination. The maximum amount of potential future indemnification is unlimited; however, the Company's director and officer insurance policy reduces the Company's exposure and may enable the Company to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification agreements is minimal. Accordingly, the Company has not recorded any liabilities for these agreements in the years ended December 31, 2015 and 2014.

In addition, the Company customarily agrees in the ordinary course of its business to indemnification provisions in its collaboration and licensing agreements, in agreements relating to the sale of assets, in various agreements involving parties performing services for the Company in the ordinary course of business and in its real estate leases. With respect to lease agreements, the indemnification provisions typically apply to claims asserted against the landlord relating to personal injury or property damage caused by the Company, to violations of law by the Company or to certain breaches of the Company's contractual obligations. The indemnification provisions appearing in the Company's collaboration and licensing agreements and in agreements relating to the sale of assets are similar, but in addition provide some limited indemnification for the collaborator, licensee or purchaser of assets in the event of third party claims alleging infringement of certain intellectual property rights or ownership rights. In each of the cases above, the indemnification obligation generally survives the termination of the agreement for some extended period, although the obligation typically has the most relevance during the contract term and for a short period of time thereafter. The maximum potential amount of future payments that the Company could be required to make under these provisions can be unlimited, but is sometimes limited by the value of payments made under the agreement or by an escrow amount. The Company has purchased insurance policies covering personal injury, property damage and general liability that reduce its exposure for indemnification and would enable it in many cases to recover a portion of any future amounts paid. The Company has never paid any material amounts to defend lawsuits or settle claims related to these indemnification provisions. Accordingly, the Company believes the estimated fair value of these indemnification arrangements is minimal. Accordingly, the Company has not recorded any liabilities for these agreements in the years ended December 31, 2015 and 2014.

### Leases

In October 2013, the Company entered into an agreement to sublease office space located at 525 University Avenue, Palo Alto, California for the period October 10, 2013 through December 31, 2016. These premises serve as the Company's corporate headquarters. In May 2015, the Company amended the sublease for this facility by extending term of the lease through December 31, 2016. The Company has an option to extend the sublease term for an additional 12 months at the end of the term. The term of the sublease is not different from the terms of the underlying lease.

Upon the Merger, the Company obtained office space located at 5001 South Miami Boulevard, Durham, North Carolina under a lease agreement. In June 2015, the Company amended the lease for this facility by extending term of the lease through January 31, 2017.

Provisions of these facilities leases generally provide for abatement of rent during certain periods and escalating rent payments during the original and extended lease terms. Rent expense is being recorded on a straight-line basis over the life of the lease.

Rent expense was \$0.3 million, \$0.2 million, \$0.3 million for the years ended December 31, 2015, 2014 and 2013, respectively. The following is a schedule of non-cancellable future minimum lease payments for operating leases at December 31, 2015 ( *in thousands* ):

Year Ended December 31,		
2016	\$	379
2017		15
Total	\$	394

## 15. Subsequent events

In January 2016, the Company's board of directors authorized the grant of 1,337,500 common stock options to its employees.

Pursuant to the Company's "at the market" equity program, in February 2016, the Company sold 600,000 shares of common stock under a Sales Agreement, at an average price of approximately \$3.00 per share for gross proceeds of approximately \$1.8 million.

## 16. Summary of Operations by Quarter (Unaudited) (In Thousands, Except Share and Per Share Amounts)

Year Ended December 31, 2015:	Quarter			
	First	Second	Third	Fourth
Revenue	\$ 31	\$ 43	\$ 35	\$ 24
Operating expenses	\$ 6,695	\$ 6,290	\$ 6,648	\$ 6,836
Net loss from continuing operations	\$ (6,651)	\$ (6,221)	\$ (6,793)	\$ (7,084)
Net loss	\$ (6,651)	\$ (6,221)	\$ (6,574)	\$ (7,076)
Net loss per share from continuing operations— <i>basic and diluted</i>	\$ (0.34)	\$ (0.31)	\$ (0.34)	\$ (0.34)
Net loss per share— <i>basic and diluted</i>	\$ (0.34)	\$ (0.31)	\$ (0.33)	\$ (0.34)
Shares used to compute net loss per share— <i>basic and diluted</i>	19,747,362	19,772,345	20,183,939	20,556,822

Year Ended December 31, 2014:	Quarter			
	First	Second	Third	Fourth
Revenue	\$ 45	\$ 33	\$ 233	\$ 30
Operating expenses	\$ 5,240	\$ 7,288	\$ 6,912	\$ 5,579
Net loss from continuing operations	\$ (5,182)	\$ (7,243)	\$ (6,661)	\$ (5,538)
Net loss	\$ (4,065)	\$ (7,223)	\$ (6,603)	\$ (5,534)
Net loss per share from continuing operations— <i>basic and diluted</i>	\$ (0.34)	\$ (0.46)	\$ (0.34)	\$ (0.28)
Net loss per share— <i>basic and diluted</i>	\$ (0.27)	\$ (0.46)	\$ (0.34)	\$ (0.28)
Shares used to compute net loss per share— <i>basic and diluted</i>	15,421,234	15,539,053	19,330,888	19,742,245

Because of the method used in calculating per share data, the quarterly per share data will not necessarily add to the per share data as computed for the year.

## Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure

None.

## Item 9A. Controls and Procedures

### *Evaluation of Disclosure Controls and Procedures*

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

### ***Inherent Limitations Over Internal Controls***

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles ("GAAP"). The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of its assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of its financial statements in accordance with generally accepted accounting principles, and that its receipts and expenditures are being made only in accordance with authorizations of its management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements.

Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### ***Changes in Internal Control Over Financial Reporting***

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during our fourth fiscal quarter that have materially affected or are reasonably likely to materially affect, our internal control over financial reporting.

### ***Management's Report on Internal Control Over Financial Reporting***

Under the supervision of our Chief Executive Officer and our Chief Financial Officer with the participation of our management, we have conducted an evaluation of the effectiveness of our internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - 2013 Integrated Framework. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2015. Such disclosure controls and procedures were effective in ensuring information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934, as amended, is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Our disclosure controls and procedures are designed to provide a reasonable level of assurance that their objectives are achieved.

The effectiveness of our internal control over financial reporting as of December 31, 2015, has been audited by Ernst & Young LLP, our independent registered public accounting firm, as stated in their report which is included as follows.

**Item 9B. Other Information**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Stockholders of  
Ocera Therapeutics, Inc.

We have audited Ocera Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Ocera Therapeutics, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Ocera Therapeutics, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Ocera Therapeutics, Inc. as of December 31, 2015 and 2014 and the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2015 of Ocera Therapeutics, Inc. and our report dated March 11, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California  
March 11, 2016

### Part III.

#### Item 10. Directors, Executive Officers and Corporate Governance

The information required under this item is incorporated herein by reference to our definitive proxy statement pursuant to regulation 14A, which proxy statement is expected to be filed with Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2015 .

#### Item 11. Executive Compensation

The information required under this item is incorporated herein by reference to our definitive proxy statement pursuant to regulation 14A, which proxy statement is expected to be filed with Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2015 .

#### Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required under this item is incorporated herein by reference to our definitive proxy statement pursuant to regulation 14A, which proxy statement is expected to be filed with Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2015 .

#### Item 13. Certain Relationships and Related Transactions and Director Independence

The information required under this item is incorporated herein by reference to our definitive proxy statement pursuant to regulation 14A, which proxy statement is expected to be filed with Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2015 .

#### Item 14. Principal Accounting Fees and Services

The information required under this item is incorporated herein by reference to our definitive proxy statement pursuant to regulation 14A, which proxy statement is expected to be filed with Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2015 .

### Part IV.

#### Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements and Schedules:

##### 1. Financial Statements

The following are included in Item 8 of this report:

<a href="#">Report of Independent Registered Public Accounting Firm</a>	<a href="#">52</a>
<a href="#">Consolidated Balance Sheets</a>	<a href="#">53</a>
<a href="#">Consolidated Statements of Operations and Comprehensive Loss</a>	<a href="#">54</a>
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (deficit)</a>	<a href="#">55</a>
<a href="#">Consolidated Statements of Cash Flows</a>	<a href="#">56</a>
<a href="#">Notes to Consolidated Financial Statements</a>	<a href="#">57</a>

##### 2. Financial Statement Schedules

All schedules are omitted because they are not applicable or the required information is shown in the Financial Statements or notes thereto.

3. List of Exhibits required by Item 601 of Regulation S-K. See part (b) below.

(b) Exhibits- The following exhibits are filed as part of, or incorporated by reference into, this report:

**Exhibits**

Exhibit Number	Description
2.1	Agreement and Plan of Merger and Reorganization, dated as of April 23, 2013, by and among the Company, Terrapin Acquisition, Inc. and Ocera Therapeutics, Inc. (Incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, as filed on April 29, 2013).
2.2	Technology Transfer and License Agreement, dated as of December 13, 2013, by and among the Company, Genentech, Inc. and F. Hoffman-La Roche, Ltd (Incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K, as filed on February 24, 2014).
3.1	Eighth Amended and Restated Certificate of Incorporation of the Company, as amended (Incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
3.2	Form of Amended and Restated Bylaws of the Company (Incorporated by reference to Exhibit 3.3 of the Company's Registration Statement on Form S-1, as amended (File No. 333-170749)).
4.1	Specimen Common Stock Certificate ((Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, as filed on July 15, 2013).
4.2	Registration Rights Agreement, dated as of April 23, 2013, by and among the Company and certain shareholders of Ocera Therapeutics, Inc. named therein (Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on April 29, 2013).
4.3	Warrant to Purchase Stock dated September 30, 2010 issued by the Company to Compass Horizon Funding Company LLC (Incorporated by reference to Exhibit 4.5 of the Company's Registration Statement on Form S-1, as amended (File No. 333-170749)).
4.4	Warrant to Purchase Stock dated September 30, 2010 issued by the Company to Oxford Finance Corporation (Incorporated by reference to Exhibit 4.6 of the Company's Registration Statement on Form S-1, as amended (File No. 333-170749)).
4.5	Form of Warrant to Purchase Stock issued by the Company on January 31, 2012. (Incorporated by reference to Exhibit 4.1 to the Company's current report on Form 8-K, filed on February 1, 2012).
4.6	Form of Common Stock Purchase Warrants, dated March 30, 2012, issued by Ocera Subsidiary, Inc. (f/k/a Ocera Therapeutics, Inc.) (Incorporated by reference to Exhibit 4.8 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
4.7	Form of Common Stock Purchase Warrants, dated October 1, 2012, issued by Ocera Subsidiary, Inc. (f/k/a Ocera Therapeutics, Inc.) (Incorporated by reference to Exhibit 4.9 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
4.8	Form of Warrant (Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 7, 2013).
4.9	Warrant to Purchase Stock dated as of July 30, 2015 issued by the Company to Oxford Finance LLC (Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on August 4, 2015).
4.10	Warrant to Purchase Stock dated as of July 30, 2015 issued by the Company to Silicon Valley Bank (Incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on August 4, 2015).
10.1##*	Second Amended and Restated License Agreement by and between the Company and UCL Business PLC, dated as of July 1, 2015.
10.2†*	Ocera Therapeutics, Inc. Second Amended and Restated Non-Employee Director Compensation Policy.
10.3†	Form of Indemnification Agreement by and between the Company and directors of Ocera Subsidiary, Inc. (f/k/a Ocera Therapeutics, Inc.) appointed to the Company's Board of Directors and officers of Ocera Subsidiary, Inc. (f/k/a Ocera Therapeutics, Inc.) appointed as officers of the Company in connection with the Merger (Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on August 14, 2013).

- 10.4† 2005 Stock Plan of Ocera Therapeutics, Inc. (now known as Ocera Subsidiary, Inc.), as amended (the “2005 Plan”) (Incorporated by reference to Exhibit 10.6 to the Company’s Current Report on Form 8-K filed on August 14, 2013).
- 10.5† Form of Notice of Stock Option Grant (Traditional Vesting) pursuant to the 2005 Plan (Incorporated by reference to Exhibit 10.7 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
- 10.6† Form of Notice of Stock Option Grant (Single Trigger) pursuant to the 2005 Plan (Incorporated by reference to Exhibit 10.8 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
- 10.7† Form of Notice of Stock Option Grant (Double Trigger) pursuant to 2005 Plan (Incorporated by reference to Exhibit 10.9 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
- 10.8† Ocera Therapeutics, Inc. Third Amended and Restated 2011 Stock Option and Incentive Plan, together with forms of award agreements (Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on June 22, 2015).
- 10.9† Agreement of Employment dated as of December 19, 2013 by and between the Company and Linda Grais (Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on December 24, 2013).
- 10.10† Agreement of Employment dated as of April 30, 2014 by and between the Company and Gaurav Aggarwal (Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on May 2, 2014).
- 10.11† Amended and Restated Employment Agreement dated as of January 6, 2016 by and between the Company and Michael Byrnes (Incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on January 8, 2016).
- 10.12† Employment Agreement dated as of January 5, 2016 by and between the Company and Stan Bukofzer, M.D. (Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on January 8, 2016).
- 10.13 Office Lease, dated as of November 28, 2011, by and between the Company and James Campbell Company LLC (Incorporated by reference to Exhibit 10.1 of the Company’s Current Report on 8-K filed on December 1, 2011).
- 10.14 First Amendment to the Lease Agreement dated August 29, 2014 by and between James Campbell, LLC and the Company (Incorporated by reference to Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2014).
- 10.15 Second Amendment to the Lease Agreement dated June 5, 2015 by and between James Campbell, LLC and the Company (Incorporated by reference to Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015).
- 10.16 Sales Agreement, dated May 15, 2015, by and between the Company and Cowen and Company, LLC (Incorporated by reference to Exhibit 10.3 of the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015).
- 10.17 Loan and Security Agreement dated as of July 30, 2015 by and among the Company, Ocera Subsidiary, Inc., Oxford Finance LLC and Silicon Valley Bank (Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on August 4, 2015).
- 21.1\* Subsidiaries of the Company.
- 23.1\* Consent of Independent Registered Public Accounting Firm
- 31.1\* Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2\* Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1\*\* Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

32.2\*\* Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS+ XBRL Instance Document

101.SCH+ XBRL Taxonomy Extension Schema Document

101.CAL+ XBRL Taxonomy Calculation Linkbase Document

101.LAB+ XBRL Taxonomy Label Linkbase Document

101.PRE+ XBRL Taxonomy Presentation Linkbase Document

101.DEF+ XBRL Taxonomy Definitions Linkbase Document

\*Filed herewith

\*\*Furnished herewith

† Indicates a management contract or compensation plan, contract or arrangement.

#Portions of these exhibits have been omitted pursuant to a request for confidential treatment submitted to the Securities and Exchange Commission.

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

OCERA THERAPEUTICS, INC.  
(Registrant)

Date: March 11, 2016

By: /s/ Linda S. Grais, M.D.  
Linda S. Grais, M.D.  
President and Chief Executive Officer  
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Linda S. Grais, M.D.</u> Linda S. Grais, M.D.	President and Chief Executive Officer	March 11, 2016
<u>/s/ Michael Byrnes</u> Michael Byrnes	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	March 11, 2016
<u>/s/ Eckard Weber, M.D.</u> Eckard Weber, M.D.	Chairman of the Board of Directors	March 11, 2016
<u>/s/ Steven P. James</u> Steven P. James	Director	March 11, 2016
<u>/s/ Nina Kjellson</u> Nina Kjellson	Director	March 11, 2016
<u>/s/ Michael Powell, Ph.D.</u> Michael Powell, Ph.D.	Director	March 11, 2016
<u>/s/ Anne M. VanLent</u> Anne M. VanLent	Director	March 11, 2016
<u>/s/ Wendell Wierenga, Ph.D.</u> Wendell Wierenga, Ph.D.	Director	March 11, 2016

CERTAIN CONFIDENTIAL PORTIONS OF THIS EXHIBIT WERE OMITTED AND REPLACED WITH “[\*\*\*]”. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECRETARY OF THE SECURITIES AND EXCHANGE COMMISSION PURSUANT TO AN APPLICATION REQUESTING CONFIDENTIAL TREATMENT UNDER RULE 24b-2 OF THE SECURITIES EXCHANGE ACT OF 1934.

## SECOND AMENDED AND RESTATED LICENSE AGREEMENT

**THIS SECOND AMENDED AND RESTATED LICENSE AGREEMENT** (the “*Agreement*”) is entered into as of July 1, 2015 ( “*Amendment Date*”) by and among **UCL BUSINESS PLC**, a public limited company incorporated under the laws of England and Wales with company registration number 02776963 and with its registered office at The Network Building, 97 Tottenham Court Road, London W1T 4TP ( “*UCL*”), and **OCERA THERAPEUTICS, INC.** , a corporation organized and existing under the laws of the State of Delaware, with principal offices located at 525 University Ave, Suite 610, Palo Alto, California 94301 ( “*Ocera*”).

### RECITALS

**WHEREAS**, UCL is the owner of rights in the Compound and the UCL Technology (as defined below);

**WHEREAS**, Ocera is engaged in the development of pharmaceutical products;

**WHEREAS**, UCL and Ocera have entered into that certain License Agreement effective as of December 22, 2008 (the “*Effective Date*”), as amended by that certain letter agreement between UCL and Ocera, dated June 23, 2010 (the “*Original Agreement*”);

**WHEREAS**, UCL and Ocera amended and restated, effective as of July 26, 2011, the Original Agreement in its entirety and replaced the Original Agreement, which replacement agreement was amended by that certain deed between UCL and Ocera, dated February 20, 2013 (collectively the “*Amended and Restated Agreement*”); and

**WHEREAS** , UCL and Ocera desire to amend and restate the Amended and Restated Agreement and to replace the Amended and Restated Agreement as set forth in this Agreement.

### AGREEMENT

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

#### 1. DEFINITIONS

**1.1** “**Affiliate**” shall mean any company or entity controlled by, controlling, or under common control with a party hereto and shall include any company or entity 50% or more of the voting stock or participating profit interest of which is owned or controlled, directly or indirectly,

by a party, and any company or other entity which owns or controls, directly or indirectly, 50% or more of the voting stock of a party.

**1.2 “Calendar Quarter”** shall mean each respective period of three consecutive months ending on March 31, June 30, September 30 and December 31.

**1.3 “Calendar Year”** shall mean each respective period of 12 consecutive months beginning on January 1.

**1.4 “Claim”** shall mean a claim of any issued patent within the UCL Patents, which covers (a) the use of a Licensed Product, or (b) the composition of a Licensed Product.

**1.5 “Claim Application”** shall mean a claim within the UCL Patents, which covers (a) the use of a Licensed Product, or (b) the composition of a Licensed Product.

**1.6 “Collaboration Agreement”** shall mean the collaborative research agreement between the parties with the same date as the Original Agreement.

**1.7 “Commercially Reasonable Efforts”** shall mean those efforts consistent with the exercise of customary scientific and business practices as applied in the pharmaceutical industry in a particular jurisdiction for development and commercialization activities conducted with respect to other products of similar potential and market size in such jurisdiction.

**1.8 “Completion”** shall mean, with respect to any preclinical or clinical trial, (a) the completion of such preclinical or clinical trial, and (b) receipt by UCL of written confirmation by Ocera that such preclinical or clinical trial successfully met the endpoints or other objectives of such trial, provided that “Completion” shall be deemed to have occurred irrespective of whether UCL has received such written confirmation, once Ocera has received confirmation from the relevant Regulatory Authority that Ocera can commence the next phase in the development of a Licensed Product. For purposes of clarification, such next phase shall in the case of Proof-of-Concept Phase II Trial be a Phase IIb Trial, shall in the case of Phase IIb Trial be a Phase III Trial and shall in the case of a Phase III Trial be an application for Regulatory Approval. **“Complete”** and **“Completed”** shall have correlative meanings.

**1.9 “Compound”** shall mean the combination of the compounds known as L-Ornithine and Phenylacetate (and all analogs, salts, polymorphs, prodrugs, isomers and formulations of the foregoing, including any derivatives which are covered by the UCL Technology).

**1.10 “Confidential Information”** shall have the meaning provided in Section 7.1.

**1.11 “Control”** shall mean, with respect to any Information, Patents or other intellectual property rights, possession by a party of the right, power and authority (whether by ownership, license or otherwise) to grant access to, to grant use of, or to grant a license or a sublicense to such Information, Patents or intellectual property rights without violating the terms of any agreement or other arrangement with any Third Party.

**1.12 “Development Plan”** shall mean a summary of the pre-clinical, clinical and pharmaceutical development plan, which sets out the activities and timetable for the development of the Compound and Licensed Product, as updated by Ocera and/or its Sublicensees from time to time and provided to UCL.

**1.13 “Dosage Form”** shall mean the physical form of a dose of a Licensed Product, such as a capsule, tablet, sachet or intravenous administration.

**1.14 “External Funding”** shall mean any funding or assistance provided by any Third Party, including without limitation, any state or public body.

**1.15 “Field”** shall mean any and all uses.

**1.16 “First Commercial Sale”** shall mean, with respect to a Licensed Product, the first sale for end use or consumption of such Licensed Product in a country after the Regulatory Authority in such country has granted Regulatory Approval.

**1.17 “GAAP”** shall mean generally accepted accounting principles in the United States, or internationally, as appropriate, consistently applied and shall mean the international financial reporting standards ( “IFRS” ) at such time as IFRS becomes the generally accepted accounting standard and applicable laws require that a party use IFRS.

**1.18 “Generic Competition”** shall mean, with respect to a given country in the Territory, the introduction by one or more Third Parties into such country, including by means of parallel imports, of one or more generic product(s). A generic must contain the same active ingredient as the reference drug and compete with the applicable Licensed Product.

**1.19 “Indication ”** shall mean a disease, disorder, symptom or other particular circumstance that indicates the advisability or necessity of a specific medical treatment or procedure.

**1.20 “Information”** shall mean all tangible and intangible (a) technology, trade secrets, inventions (whether patentable or not), methods, know-how, clinical and test data and results (including pharmacological, toxicological and clinical test data and results), analytical and quality control data, results or descriptions, software and algorithms and (b) compositions of matter, cells, cell lines, assays, animal models and physical, biological or chemical material.

**1.21 “Licensed Product”** shall mean a product that contains or comprises the Compound, including all analogs, formulations, combinations with other active agents, line extensions and modes of administration thereof.

**1.22 “Losses”** shall have the meaning provided in Section 9.1.

**1.23 “Major Country”** shall mean France, Germany, Italy, Spain, the United Kingdom, Japan or the United States of America.

**1.24 “NAFLD Collaboration Agreement”** shall mean the collaboration research agreement between UCL and Ocera entered into on the Amendment Date.

**1.25 “NAFLD Data Delivery Date”** shall mean the date upon which UCL delivers to Ocera the results of the NAFLD Preclinical Study.

**1.26 “NAFLD Preclinical Study”** shall mean a study of the Compound in animal models of NAFLD conducted by Professor Rajiv Jalan or his research team as more fully described in and pursuant to the NAFLD Collaboration Agreement.

**1.27 “NDA”** shall mean a new drug application (as more fully defined in 21 C.F.R. 314.5 et seq.) or equivalent application, and all amendments and supplements thereto filed with the applicable Regulatory Authority in a country or jurisdiction in the Territory (including any supra-national agency such as in the European Union), including all documents, data, and other information concerning a pharmaceutical product which are necessary for gaining Regulatory Approval to market and sell a pharmaceutical product.

**1.28 “Net Sales”** shall mean the total gross amount invoiced for sales or other dispositions of Licensed Products by or on behalf of Ocera and/or its Sublicensee(s) to Third Party customers, after deducting, in accordance with GAAP, any (a) credits, allowances, samples, discounts and rebates to, and chargebacks from the account of, such Third Party customers; (b) freight, postage, shipping and insurance costs; (c) trade discounts, cash discounts, quantity discounts and rebates, including charge back payments, and rebates granted to managed care organizations, including, but not limited to, wholesalers and chain and pharmacy buying groups; (d) retroactive price reductions; (e) amounts payable resulting from governmental, regulatory or agency mandated rebate programs, (f) amounts repaid or credited for uncollectible amounts on previously sold products; (g) sales, value-added and other direct taxes incurred directly in connection with the sale of Licensed Products; and (h) customs duties, custom broker charges and other surcharges and governmental charges incurred in connection with the exportation or importation of Licensed Products, to the extent the same are actually charged and separately itemised on the relevant invoice. In the case of any sale or other disposal of a Licensed Product between or among Ocera and its Affiliates or Sublicensees, for resale, Net Sales shall be calculated as above only on the value charged or invoiced on the first arm’s-length sale thereafter to a Third Party. In the case of any sale or other disposal for value, such as barter or counter-trade, of any Licensed Product other than in an arm’s-length transaction exclusively for money, Net Sales shall be calculated as above on the value of the non-cash consideration received or, if higher, the average sales price of such Licensed Product (for like quantity) during the applicable reporting period in the country of sale or disposal; *provided, however*, that any dispute as to the determination of Net Sales in accordance with the immediately preceding sentence that cannot be resolved by agreement of the parties shall be referred to an expert for resolution in accordance with the provisions of Exhibit E.

Any disposal of Licensed Products for, or use of Licensed Products in, clinical or pre-clinical trials, given as free samples or given free to government or charitable organisations solely for distribution as part of indigent programs shall not be included in Net Sales.

In the case of any product that is a Licensed Product sold in combination with any other active ingredient(s), compound(s) or component(s) (for example, a delivery device) that is not part of the Licensed Product or is priced separately, whether packaged together or in the same therapeutic formulation (a **“Combination Product”**), Net Sales for such Combination Product shall be

calculated by multiplying actual Net Sales of such Combination Product by the fraction  $A/(A+B)$  where A is the invoice price of the Licensed Product, if sold separately, and B is the total invoice price of the other active ingredient(s) or compound(s) in the Combination Product, if sold separately. If, on a country-by-country basis, the other active ingredient(s) or compound(s) in the Combination Product is not sold separately in said country, Net Sales for the purpose of determining royalties of the Combination Product shall be calculated by multiplying actual Net Sales of such Combination Product by the fraction  $A/D$ , where A is the invoice price of the Licensed Product, if sold separately, and D is the invoice price of the Combination Product. If neither the Licensed Product nor the other active ingredient(s) or compound(s) in the Combination Product is sold separately in a given country, the parties shall determine Net Sales for such Combination Product by mutual agreement based on the relative contribution of the Licensed Product and the other active ingredient(s) or compound(s) in the Combination Product; *provided, however*, that any dispute as to the determination of Net Sales in accordance with the immediately preceding sentence that cannot be resolved by agreement of the parties shall be referred to an expert for resolution in accordance with the provisions of Exhibit E.

**1.29 “New Compound”** shall mean any compound or combination of compounds that involves lowering of ammonia as part of its therapeutic effect, excluding the Compound and [\*\*\*].

**1.30 “Non-Commercial Research”** shall mean use of UCL Patents and/or UCL Know-How for academic research or other non-for-profit purposes that do not use the UCL Patents or the UCL Know-How in the research, development, production or manufacture of products for commercial purposes.

**1.31 “Nondisclosure Agreement”** shall mean the nondisclosure agreement between the parties, dated May 15, 2008.

**1.32 “Option”** shall have the meaning provided in Section 2.9.

**1.33 “Option Term”** shall mean the term commencing on the Amendment Date and extending for up to 5 years after the NAFLD Data Delivery Date provided annual option fees are paid by Ocera to UCL as set forth in Section 2.9.

**1.34 “Patents”** shall mean (a) patents, re-examinations, reissues, renewals, confirmations, extensions (including supplemental protection certificates) and term restorations, and (b) pending applications for patents, including, without limitation, provisional applications, continuations, continuations-in-part, divisional and substitute applications, including, without limitation, inventors’ certificates.

**1.35 “Phase IIb Trial”** shall mean a study of a Licensed Product in human patients to determine initial efficacy before commencing a Phase III Trial, which study is determined by Ocera or its Sublicensee to be a Phase IIb Trial.

**1.36 “Phase III Trial”** shall mean a confirmatory pivotal study in human patients with a defined dose or a set of defined doses of a Licensed Product designed to ascertain efficacy and

safety of such Licensed Product for the purpose of submitting an application for Regulatory Approval to the competent Regulatory Authority in a country or jurisdiction in the Territory.

**1.37 “Proof-of-Concept Phase II Trial”** shall mean (a) a study of a Licensed Product in human patients to obtain a preliminary indication of the doses that result in suitable efficacy, safety and tolerance for acute liver failure, and (b) a study of a Licensed Product in human patients to obtain a preliminary indication of the doses that result in suitable efficacy, safety and tolerance for hepatic encephalopathy.

**1.38 “Regulatory Approval”** shall mean any and all approvals (including price and reimbursement approvals, if required), licenses, registrations, or authorizations of any country, federal, supranational, state or local regulatory agency, department, bureau or other government entity that are necessary for the manufacture, use, storage, import, transport and/or sale of a Licensed Product in such jurisdiction.

**1.39 “Regulatory Authority”** shall mean the governmental authority or agency having the administrative authority to regulate the marketing of human pharmaceutical products or biological therapeutic products, delivery systems and devices in the applicable country or jurisdiction in the Territory, including the United States Food and Drug Administration, or any successor agency thereto, in the United States of America.

**1.40 “Royalty Term”** shall mean, in the case of any Licensed Product, in any country in the Territory, the period of time commencing on the First Commercial Sale in such country and ending upon the later of (a) the expiration in such country of the last-to-expire Valid Claim within the UCL Patents covering (i) the composition or use of the Compound or (ii) the composition or use of the Licensed Product or (b) ten (10) years after the date of First Commercial Sale in such country, subject to Section 3.3.

**1.41 “Sublicense Agreement”** means any agreement between Ocera and a Sublicensee.

**1.42 “Sublicensee”** shall mean a Third Party or an Affiliate of Ocera to whom Ocera has granted a sublicense of any of the rights with respect to Licensed Products licensed to Ocera under Section 2.1, beyond the mere right to purchase Licensed Product.

**1.43 “Term”** shall have the meaning provided in Section 8.1.

**1.44 “Territory”** shall mean the world.

**1.45 “Third Party”** shall mean any entity other than UCL or Ocera or an Affiliate of UCL or Ocera.

**1.46 “Third Party License”** shall have the meaning provided in Section 3.4.

**1.47 “UCL NAFLD Know-How”** shall mean Information that UCL or any of its Affiliates Controls (i) on the Amendment Date that has been developed by Professor Rajiv Jalan and the members of his research team working at the University and which relates to the lowering of

ammonia to reduce the progression of NAFLD, liver cancer (including HCC), and/or fibrosis and (ii) after the Effective Date that arises from the NAFLD Preclinical Study.

**1.48 “UCL NAFLD Patents”** shall mean the Patents listed in Exhibit F to this Agreement and any Patents that claim priority solely from the Patents listed in Exhibit F and/or any of their priority filings and any other Patents owned by UCL that relate to the UCL NAFLD Know-How.

**1.49 “UCL NAFLD Technology”** shall mean the UCL NAFLD Patents and UCL NAFLD Know-How.

**1.50 “UCL Indemnitee”** shall have the meaning provided in Section 9.1.

**1.51 “UCL Know-How”** shall mean Information that UCL or any of its Affiliates Controls (i) on the Effective Date that has been developed by Professor Rajiv Jalan and the members of his research team working at the University and which relates directly to the Compound in the Field in the Territory, including all Information listed in Exhibit B, and (ii) after the Effective Date that arises from the Proof-of-Concept Phase II Trial, the Collaboration Agreement, or the NAFLD Preclinical Study and (iii) in respect of which Ocera exercises its option under Section 2.7.

**1.52 “UCL Patents”** shall mean the Patents listed in Exhibit A to this Agreement and any Patents that claim priority solely from the Patents listed in Exhibit A and/or any of their priority filings and any other Patents owned by UCL that relate to the Compound and are based on UCL Know-How.

**1.53 “UCL Technology”** shall mean the UCL Patents and UCL Know-How.

**1.54 “University”** shall mean University College London, a charity incorporated by Royal Charter and having its address at Gower Street, London WC1E 6BT.

**1.55 “Valid Claim”** shall mean a claim of any issued, unexpired patent within the UCL Patents that has not been revoked or held unenforceable or invalid by a decision of a court or governmental agency of competent jurisdiction from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal, and that has not been disclaimed or admitted to be invalid or unenforceable through formal patent prosecution and/or maintenance proceedings including through reissue or disclaimer.

## **2. GRANT OF RIGHTS**

**2.1 Licenses Granted to Ocera.** UCL hereby grants to Ocera, during the Term, an exclusive license under the UCL Technology to research, develop, make, have made, use, offer for sale, sell, import and export the Compound and Licensed Products in the Field in the Territory subject to and in accordance with the terms of this Agreement. Without limiting the foregoing, under the licenses granted under this Section 2.1, UCL hereby grants to Ocera, during the Term, the exclusive right to access, use and reference all data and know-how within the UCL Technology in the Territory in order to research, develop, make, have made, use, offer for sale, sell, import and export the Compound and Licensed Products in the Field in the Territory.

**2.2 Commercially Reasonable Efforts.** Ocera, agrees that it and, as applicable, its Sublicensees, shall use Commercially Reasonable Efforts to follow the Development Plan and to pursue development and commercialization of Licensed Products in the Field in the Territory which shall include Commercially Reasonable Efforts to:

- (a) develop a commercially viable Licensed Product in the Field;
- (b) file an Investigational New Drug application for a Licensed Product on or before December 31, 2010;
- (c) initiate human clinical trials of a Licensed Product funded by Ocera on or before December 31, 2011;
- (d) initiate a first Dosage Form (IV), first Indication proof-of-concept Phase IIb Trial by the end of the first Calendar Quarter 2014;
- (e) initiate a second Dosage Form (oral), first Indication study in humans by the end of the third Calendar Quarter 2015; and
- (f) market and promote at least one Licensed Product in each Major Country where Regulatory Approval has been granted for that Licensed Product.

Every six (6) months from the Effective Date, Ocera will provide UCL with a brief report on the status of such development and commercialization activities and on Ocera's progress with the Development Plan. As part of this report Ocera shall inform UCL of the status of the IV Acute Liver Failure study progress (second Indication) and share its plans with UCL for the potential development of this Indication. If a report referred to in this paragraph demonstrates that Ocera and/or its Sublicensees have not undertaken any development and/or commercialization activities in respect of Licensed Products within the 6 month period covered by the report or else have undertaken only development or commercialization activities which are immaterial or trivial in nature, Ocera shall within 30 days of a request from UCL meet with UCL to discuss the report and shall provide UCL with evidence of Ocera's ongoing commitment to the development and commercialization of Licensed Products.

Upon written notice to UCL, Ocera may extend the dates for performance of the above diligence obligations for a reasonable period of time if necessary to meet the requirements or requests of any applicable Regulatory Authority or other reasonable considerations, including, but not limited to, safety and manufacturing considerations.

**2.3 No Implied Licenses .** No right or license under any Patents or Information of either party is granted or shall be granted by implication. All such rights or licenses are or shall be granted only as expressly provided in this Agreement.

**2.4 Proof-of-Concept Phase II Trials .** The Proof-of-Concept Phase II Trial was conducted and managed by UCL pursuant to study designs prepared by Professor Rajiv Jalan. UCL did consult with Ocera and take account of any reasonable views expressed by Ocera, provided

such views were expressed by Ocera within any reasonable timeframe notified to Ocera by UCL, on all substantial matters related to such study designs, but Ocera was not involved in the conduct or management of the Proof-of-Concept Phase II Trial, although Ocera did provide support. UCL was solely responsible for all costs and expenses of such Proof-of-Concept Phase II Trial, and funding for such trial was provided through a grant by the Medical Research Council to UCL. For the avoidance of doubt UCL and UCLB are not responsible for any further costs incurred by Ocera in carrying out the Development Plan.

**2.5 Supply of Compound** . Promptly after the Effective Date, UCL shall make available to Ocera at no cost all quantities of Compound, including, without limitation, any raw materials and intermediates, UCL currently has on-hand for use solely in non-clinical studies. UCL shall have no other obligations under this Agreement to supply Compound or Licensed Product to Ocera for any purposes, including, without limitation, clinical purposes and commercial purposes, unless otherwise mutually agreed in writing by the parties. Any quantities of Compound supplied by either party for use solely in non-clinical studies are supplied on an ‘as is’ basis and without any warranty or representation as to its quality or fitness for any purpose.

**2.6 Technology Transfer** . Within 90 days of the Effective Date UCL shall, at its own expense, transfer to Ocera all UCL Technology as is reasonably necessary in order to allow Ocera to exercise fully the licences granted to Ocera under Section 2.1, to the extent that UCL is legally entitled to disclose such UCL Technology to Ocera. UCL shall at the request of Ocera provide Ocera, free of charge, with up to 90 days of assistance regarding all such UCL Technology transferred under this Section 2.6 within the 6 month period after the Effective Date. If Ocera requires any further assistance from UCL in addition to that provided under this Section 2.6, UCL shall use its reasonable endeavors to provide such assistance but accepts no further obligation in this respect and any such further assistance provided by UCL shall be charged to Ocera based on the time spent by each of UCL’s or the University’s officers, employees, consultants, agents, representatives, contractors and advisors engaged in providing the further assistance at the rates set out in Exhibit C plus all out-of-pocket expenses reasonably incurred by such individuals, such payment shall be payable by Ocera to UCL monthly in arrears.

**2.7 Non-Commercial Research** . Notwithstanding the grant of the exclusive licence under Section 2.1, UCL shall retain the right to use, and allow both (i) the University and (ii) non-profit entities acting in collaboration with UCL and/or the University, to use the UCL Technology solely for Non-Commercial Research. Ocera shall have an option to take a licence to any Information that relates to the Compound and that arises from any such Non-Commercial Research in which Professor Rajiv Jalan and the members of his research team working at the University are involved during the Term. Such option shall be exercisable by Ocera giving written notice to UCL within 30 days of UCL providing details of such Information to Ocera. Upon Ocera’s exercise of such option, the relevant Information shall be deemed to be included within the meaning of “UCL Know-How” and shall be subject to the provisions of this Agreement. Ocera’s license shall be subject to the terms of any External Funding for the Non-Commercial Research from which the relevant Information arises. UCL shall share with Ocera the terms attached to any External Funding if such terms could adversely affect the rights or obligations of Ocera and in these circumstances the terms and conditions related to such External Funding will be subject to the prior written approval of

Ocera, which may not be unreasonably withheld or delayed. In any disclosure contemplated by this Section 2.7, UCL shall take all reasonable steps to preserve the rights of Ocera as granted by the terms of this Agreement.

**2.8 Sublicensing and Subcontracting** . Ocera may sublicense and/or subcontract its rights under this Agreement provided that it enters into a written agreement with each Sublicensee and shall ensure that:

(a) the provisions of the Sublicence Agreement are consistent with the provisions of this Agreement (in particular, Sections 2.1, 2.2, 2.8, 3.4, 4.1, 5, 6.1, 7, 8, 9.1, 9.2 and 10.6) and do not place any obligations on UCL more onerous than those set forth herein;

(b) the Sublicence Agreement imposes obligations of confidentiality on the Sublicensee which are no less onerous than those set out in Section 7;

(c) the Sublicence Agreement shall be terminated if the Sublicensee challenges, opposes or otherwise disputes (or assists any Third Party to challenge, oppose or otherwise dispute) the ownership, validity and/or scope of any of the UCL Technology in any court, patent office or arbitration proceedings; and

(d) each Sublicence Agreement names UCL as a beneficiary of the Sublicence Agreement so that UCL has a direct right of action against the Sublicensee in the event that the Sublicensee is in breach of the Sublicence Agreement, but only if and to the extent that Ocera fails to timely enforce such rights on its own behalf.

Ocera shall procure that each Sublicensee complies fully at all times with the provisions of its Sublicence Agreement and Ocera shall be liable for all acts and omissions of each of its Sublicensees that, if committed by Ocera, would constitute a breach of any of the provisions of this Agreement. Ocera shall provide UCL with a true and complete copy of any Sublicence Agreement promptly following its execution; provided, however, that prior to providing such Sublicence Agreement to UCL, Ocera may first redact any Confidential Information that is not necessary to disclose to UCL in order to ensure compliance with this Agreement.

**2.9 Option Grant.** UCL hereby grants to Ocera an exclusive option to license a New Compound under the UCL NAFLD Technology (the "Option"). The Option shall remain in effect for the duration of the Option Term provided Ocera pays to UCL an annual option fee of \$[\*\*\*], the first of which will be due within 30-days of the NAFLD Data Delivery Date. The Option Term may be extended by written agreement between UCL and Ocera. The Option shall be exercisable by Ocera giving written notice to UCL. Upon exercise of the Option, UCL and Ocera shall enter into good faith negotiations to execute an exclusive license under commercially reasonable terms.

**2.10** [\*\*\* ]

**3. FEES AND PAYMENTS**

**3.1 Upfront Fee.** Ocera paid to UCL a non-refundable upfront fee of US\$1,000,000 within 45 days after the Effective Date.

**3.2 Milestone Payments.** Within 45 days following the first occurrence of each of the events set forth below with respect to a Licensed Product, Ocera shall pay to UCL the milestone payment set forth below (whether such milestone is achieved by Ocera or any of its Sublicensees):

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

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**Milestone Events for First Dosage Form (e.g., IV), First Indication (e.g., acute hepatic encephalopathy (HE)) of a Licensed Product**

	<b>Milestone Payment</b>
Completion of Phase IIb Trial in first Major Country	[***]
Completion of Phase III Trial in first Major Country	[***]
Regulatory Approval in First Major Country	[***]

**Milestone Events for First Dosage Form (e.g., IV), Second and each Subsequent Indication (e.g., liver cirrhosis) of a Licensed Product**

	<b>Milestone Payment</b>
Completion of Phase IIb Trial in first Major Country	[***]
Completion of Phase III Trial in first Major Country	[***]
Regulatory Approval in First Major Country	[***]

**Milestone Events for Second Dosage Form (e.g., oral), First Indication (e.g., minimal HE) of a Licensed Product**

	<b>Milestone Payment</b>
Completion of Phase IIb Trial in first Major Country	[***]
Completion of Phase III Trial in first Major Country	[***]
Regulatory Approval in First Major Country	[***]

**Sales Milestones**

	<b>Milestone Payment</b>
First Calendar Year in which total annual Net Sales of all Licensed Products equal or exceed [***]	[***]
First Calendar Year in which total annual Net Sales of all Licensed Products equal or exceed [***]	[***]
First Calendar Year in which total annual Net Sales of all Licensed Products equal or exceed [***]	[***]
First Calendar Year in which total annual Net Sales of all Licensed Products equal or exceed [***]	[***]
First Calendar Year in which total annual Net Sales of all Licensed Products equal or exceed [***]	[***]

Each of the milestone payments described in this Section 3.2 shall be payable only one time for the first occurrence of the applicable milestone event. For purposes of clarification, all references made to “first Major Country” shall mean the first Major Country in which the particular milestone event is achieved, which may or may not be the same Major Country as that in which an earlier milestone event was achieved for the same Dosage Form and/or Indication of a Licensed Product. The terms ‘first Dosage Form’,

'second Dosage Form', 'first Indication' and 'second Indication' shall apply separately in respect of and according to the order in which the combinations of Dosage Form and

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

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Indication meet each milestone event. Should, for example, the first Indication or Dosage Form be abandoned for any reason in the first Major Country and a new Indication or Dosage Form is developed, then that new Indication or Dosage Form shall replace the first Indication or Dosage Form for purposes of the milestone events in this Section 3.2, with milestone payments beginning with the first milestone event to occur following the last milestone event for which a milestone payment has already been made.

In relation to all clinical trials to which the milestone payments described in this Section 3.2 relate, Ocera shall notify UCL of the endpoints or other objectives of the trial and shall promptly notify UCL in writing of the conclusion or completion of the trial together with an evaluation against the original endpoints or other objectives for the purpose of determining “Completion”.

The parties agree that in the event that, following the Effective Date, all Claim Applications have been finally rejected by a court or governmental agency of competent jurisdiction from which no appeal can be taken, or with respect to which an appeal is not taken by either party within the time allowed for appeal in all of the Major Countries, the parties shall, upon written request by Ocera to UCL, negotiate in good faith appropriate modifications to this Section 3.2 to change any outstanding milestone events and reduce the amounts of any milestone payments not yet paid or due to UCL. For the avoidance doubt, UCL shall not be required to repay any sums paid by or due from Ocera in respect of milestone events that have already occurred prior to the discussions referred to in this paragraph.

### **3.3 Royalties.**

(a) **Royalty Rates.** During the Royalty Term, Ocera shall pay to UCL royalties on Net Sales of Licensed Products in the Field in the Territory at the following rates, subject to Section 3.3(b), (c) or (d), as applicable, and Section 3.4:

(i) [\*\*\*] of that portion of total annual Net Sales of Licensed Products in the Field in the Territory that is less than or equal to [\*\*\*];

(ii) [\*\*\*] of that portion of total annual Net Sales of Licensed Products in the Field in the Territory that is greater than [\*\*\*] and less than or equal to [\*\*\*]; and

(iii) [\*\*\*] of that portion of total annual Net Sales of Licensed Products in the Field in the Territory that is greater than [\*\*\*].

(b) **Reduction in Royalty Rates Where There Is No Valid Composition or Use Claim.** In any period during the Royalty Term in which there is no Valid Claim within the UCL Patents covering the composition or use of the Compound or Licensed Product in any country in the Territory, then:

(i) the royalties due to UCL with respect to such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above if there is no Generic Competition in such country; and

(ii) the royalties due to UCL with respect to such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to zero if there is Generic Competition in such country.

(c) **Reduction in Royalty Rates Where There Is A Valid Composition or Use Claim in a Major Country.** In any period during the Royalty Term in which there is a Valid Claim within the UCL Patents covering the composition or use of the Compound or Licensed Product in any Major Country in the Territory and there is Generic Competition in such Major Country, then, subject to Section 3.3(e):

(i) if the market share of such Licensed Product in such Major Country, as reported in sales by Intercontinental Medical Statistics ( "*IMS*" ), declines by at least 15% but less than 30% compared to the market share of such Licensed Product in such Major Country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above;

(ii) if the market share of such Licensed Product in such Major Country, as reported in sales by IMS, declines by at least 30% but less than 45% compared to the market share of such Licensed Product in such Major Country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such Major Country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above; and

(iii) if the market share of such Licensed Product in such Major Country, as reported in sales by IMS, declines by more than 45% compared to the market share of such Licensed Product in such Major Country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such Major Country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above.

(d) **Reduction in Royalty Rates Where There Is A Valid Composition or Use Claim in a Country Other Than a Major Country.** In any period during the Royalty Term in which there is a Valid Claim within the UCL Patents covering the composition or use of the Compound or Licensed Product in any country in the Territory other than a Major Country and there is Generic Competition in such country, then, subject to Section 3.3(e):

(i) if the market share of such Licensed Product in such country, as reported in sales by IMS, declines by at least 15% but less than 30% compared to the market share of such Licensed Product in such country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above;

(ii) if the market share of such Licensed Product in such country, as reported in sales by IMS, declines by at least 30% but less than 45% compared to the market share of such Licensed Product in such country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above;

(iii) if the market share of such Licensed Product in such country, as reported in sales by IMS, declines by more than 45% compared to the market share of such Licensed Product in such country prior to Generic Competition, then the royalties due to UCL for sales of such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to [\*\*\*] of the royalty rates set forth in Section 3.3(a) above; and

(iv) notwithstanding the foregoing, if Ocera can demonstrate that sales of such Licensed Product in such country has rendered such Licensed Product unprofitable, then the royalties due to UCL with respect to such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to zero.

(e) **Reduction in Royalty Rates Where There Is A Valid Composition or Use Claim and Ocera Brings an Infringement Action.** In any period during the Royalty Term in which there is a Valid Claim within the UCL Patents covering the composition or use of the Compound or Licensed Product in any country in the Territory and there is Generic Competition in such country, and Ocera (or its Sublicensee) initiates an action or proceedings to cease and/or prevent such Generic Competition from commencing and/or continuing in such country as contemplated by Section 5.3, then notwithstanding anything to the contrary set forth herein, the royalties due to UCL for sales of such Licensed Product in such country pursuant to this Section 3.3 shall be reduced to zero. If such action results in termination of the Generic Competition in such country, then any recovery obtained as a result of such action shall be applied in the manner described in Section 5.3, and Ocera shall pay royalties at the then-applicable royalty rate in accordance with this Section 3.3 on any Net Sales of such Licensed Product in such country during the period in which there was Generic Competition where Ocera did not pay previously pay royalties on such Net Sales by virtue of this Section 3.3(e), plus interest on such royalties from the date that such royalties would otherwise have been due at the at a rate equivalent to 2% above the Barclays Bank plc base lending rate then in force in London.

**3.4 Royalty Credit.** On a Licensed Product-by-Licensed Product basis, in the event that Ocera or any of its Sublicensees, as applicable, obtains a license to any intellectual property rights of a Third Party (a “**Third Party License**” ) in order to avoid infringing such Third Party’s patent(s) in the course of the manufacture, use or sale of Licensed Products, Ocera shall have the right to credit [\*\*\*] of any payment made to such Third Party under such Third Party License against up to [\*\*\*] of any royalty otherwise due to UCL hereunder; *provided, however*, that in no event shall the royalties due to UCL for any Licensed Product in any Calendar Quarter be reduced to less than [\*\*\*] of the royalties then due and payable to UCL.

**3.5 Partnering Opportunities Introduced by UCL.** In the event that Ocera enters into a written agreement regarding a Licensed Product with China Medical Systems Holdings, Ltd. and/or any other Third Party which was introduced to Ocera in writing by UCL and/or any Affiliate of UCL on or before the Effective Date, Ocera will pay to UCL, in addition to the milestone payments made by Ocera pursuant to Section 3.2, a percentage of all milestone payments received by Ocera from such Third Parties under such agreements within 45 days of the receipt of such funds at the following rates:

(a)(i) [\*\*\*] of any milestone payments received by Ocera from such Third Party for the achievement by such Third Party of any milestone events outlined in Section 3.2 of this Agreement up to, but not including, the milestone event regarding Completion of successful Phase III Trial in the first Major Country for the first Dosage Form, first Indication of Licensed Product; and

(a)(ii) [\*\*\*] of any milestone payments received by Ocera from such Third Party for the achievement by such Third Party of any of the remaining milestone event outlined in Section 3.2 of this Agreement, beginning with Completion of successful Phase III Trial in the first Major Country for the first Dosage Form, first Indication of Licensed Product; or

(b) where the milestone events in Ocera's written agreement with such Third Party are structured differently to those outlined in Section 3.2 of this Agreement, [\*\*\*] of any milestone payment received by Ocera from such Third Party relating to the first Dosage Form, first Indication of Licensed Product.

For purposes of clarification, Ocera shall not be obligated to make any payments to UCL under this Section 3.5 unless such Third Party is required under Ocera's agreement with such Third Party to make such milestone payments to Ocera.

**3.6** [\*\*\*]

**4. PAYMENT; RECORDS; AUDITS**

**4.1 Payment; Reports.** All payments due to UCL under this Agreement shall be paid within 45 days of the end of each Calendar Quarter, unless otherwise specifically provided herein. Each payment shall be accompanied by a report of Net Sales of Licensed Products by Ocera and its Sublicensees in sufficient detail to permit confirmation of the accuracy of the payment made, including, without limitation the information set out in Exhibit D. Ocera shall keep, and shall cause its Sublicensees to keep, complete and accurate records pertaining to the sale or other disposition of Licensed Products in sufficient detail to permit UCL to confirm the accuracy of all payments due hereunder.

All payments due to Ocera under this Agreement pursuant to Section 3.6 shall be paid within 45 days of the end of each Calendar Quarter, unless otherwise specifically provided herein. Each payment shall be accompanied by a report of all revenue received by UCL from third-party licensees of the UCL NAFLD Technology and all revenue generated by UCL commercialization of a New Compound under the UCL NAFLD Technology. The reports shall be in sufficient detail to permit confirmation of the accuracy of the payment made. UCL shall keep complete and accurate records pertaining to the receipt of third-party license revenue and sales of New Compounds under the UCL NAFLD Technology in sufficient detail to permit Ocera to confirm the accuracy of all payments due hereunder.

**4.2 Exchange Rate; Manner and Place of Payment.** All payments hereunder shall be payable in U.S. dollars. When conversion of payments from any foreign currency is required, such conversion shall be at an exchange rate equal to the weighted average of the rates of exchange for

the currency of the country where such Net Sales occurred as published by OANDA.com, or such other published currency rate as mutually agreed upon in writing by the parties, during the Calendar Quarter for which a payment is due. All payments owed under this Agreement shall be made by wire transfer in immediately available funds to a bank and account designated in writing by UCL for payments due to UCL and by Ocera for payments due to Ocera.

**4.3 VAT and Sales Tax.** The parties acknowledge that no value added tax, sales tax or similar taxes are payable in respect of any payments made by Ocera to UCL or by UCL to Ocera under this Agreement. In the event any such taxes become payable due to a change in the law, the parties shall promptly meet to discuss the change and shall cooperate in good-faith to determine how best to divide and structure payment between the parties so as to minimize the overall tax burden on each party, but in any event the parties agree that they shall not be entitled to derive a benefit from any such change in the law and shall pay any such taxes due and owing by the respective parties to the extent they are recoverable by the respective parties.

**4.4 Income Tax Withholding.** If any taxes are required by law to be withheld by a party owing payment to the other party, that party will (a) deduct such taxes from the payment made to the other party, (b) timely pay the taxes to the proper taxing authority, and (c) send proof of payment to the other party and certify its receipt by the taxing authority within the period for payment permitted by the relevant law. For the avoidance of doubt, any amount withheld by a party from any amount payable to the other party under this Agreement for or on account of taxes shall be deemed paid to the other party for purposes of this Agreement. The parties shall cooperate to ensure that all sums payable under this Agreement can be lawfully paid without deduction or withholding of tax, where this is possible under the laws of the relevant jurisdiction, and in particular, the parties will (i) upon execution of this Agreement, (ii) promptly upon reasonable demand by the other party, and (iii) promptly upon learning that any form previously provided by it has become obsolete or incorrect, deliver to the other party, or to such government or taxing authority as the other party reasonably directs, any form or document that may be required or reasonably requested in order to allow the other party to make any payment under this Agreement without any deduction or withholding for or on account of any tax or with such deduction or withholding at a reduced rate (including IRS Form W-8BEN), with any such form or document to be accurate and completed in a manner reasonably satisfactory to the other party and to be executed and to be delivered with any reasonably required certification. UCL hereby represents that it is a “foreign person” (including within the meanings used in Treasury Regulation § 1.6041-4(a)(4) and in Treasury Regulations §§ 1.1441-1 to —9) for all U.S. federal income tax purposes.

**4.5 Audits.** During the Term and for a period of three years thereafter, Ocera shall keep (and shall cause its Sublicensees to keep) complete and accurate records pertaining to the sale or other disposition of Licensed Products in sufficient detail to permit UCL to confirm the accuracy of all royalty payments due hereunder. UCL shall have the right to cause an independent, certified public accountant reasonably acceptable to Ocera to audit such records (including the records of Ocera’s Sublicensees) to confirm Net Sales and royalty payments for a period covering not more than the three years preceding the date the applicable payment was made. Such audits may be exercised during normal business hours upon a minimum of 60 days prior written notice to Ocera, but no more frequently than once per year. Prompt adjustments shall be made by the parties to

reflect the results of such audit. UCL shall bear the full cost of such audit unless such audit discloses an underpayment by Ocera of more than 5% of the amount of royalty payments due under this Agreement, in which case, Ocera shall bear the full cost of such audit and shall promptly remit to UCL the amount of any underpayment.

During the term of any third-party license under the UCL NAFLD Technology, UCL shall keep complete and accurate records pertaining to licensing revenue received under such license in sufficient detail to permit Ocera to confirm the accuracy of all payments due hereunder. Ocera shall have the right to cause an independent, certified public accountant reasonably acceptable to UCL to audit such records to confirm license revenue received by UCL and payments made to Ocera for a period covering not more than the three years preceding the date the applicable payment was made. Such audits may be exercised during normal business hours upon a minimum of 60 days prior written notice to UCL, but no more frequently than once per year. Prompt adjustments shall be made by the parties to reflect the results of such audit. Ocera shall bear the full cost of such audit unless such audit discloses an underpayment by UCL of more than 5% of the amount of payments due under this Agreement, in which case, UCL shall bear the full cost of such audit and shall promptly remit to Ocera the amount of any underpayment.

## **5. INTELLECTUAL PROPERTY**

**5.1 Patent Prosecution and Maintenance.** Ocera shall have first right, but not the obligation, to file, prosecute and maintain all patent applications and patents included in the UCL Patents. UCL and its Affiliates and employees of UCL or its Affiliate shall testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid Ocera to file, prosecute and maintain all such patent applications and patents in all countries. Ocera shall be responsible for all costs, fees and expenses, including attorneys' fees, incurred from and after the Effective Date in connection with the filing and prosecution of such patent applications and the maintenance of such patents. Ocera shall consult with and take account of any reasonable views expressed by UCL, provided such views are expressed by UCL within any reasonable timeframe notified to UCL by Ocera, on all substantial matters concerning prosecution strategy and shall keep UCL informed of progress with regard to the filing, prosecution and maintenance of the UCL Patents by providing UCL with copies of official actions, amendments and responses with respect to such prosecution. Ocera agrees to notify UCL in writing in a timely manner if it does not desire to support the continued prosecution or appeals or maintenance of any patent applications or patents included in the UCL Patents. In the event Ocera declines to pursue the filing, prosecution or maintenance of any patent applications or patents included in the UCL Patents, UCL may, at its own expense, continue to prosecute or maintain such patent application or patent; provided that UCL will first discuss with Ocera and consider in good faith any reasons for not continuing to prosecute or maintain such patent application or patent. In the event UCL elects to continue such prosecution or maintenance of such patent application or patent in accordance with the immediately preceding sentence, the licence granted to Ocera in respect of such patent application or patent under Section 2.1 shall immediately terminate and the relevant patent application or patent shall cease to be a UCL Patent for the purposes of this Agreement except that the license granted to Ocera under a UCL Patent that is also a UCL NAFLD Patent shall not terminate and shall not cease to be a UCL Patent for the purposes of this Agreement.

**5.2 Patent Term Extension and Restoration** . The parties shall cooperate in obtaining any patent term extension, restoration or supplemental protection certificates or their equivalents in any country where applicable to UCL Patents. Ocera shall have first right, but not the obligation, to elect to seek such patent term extension, restoration or supplemental protection, and UCL shall abide by such election and shall take reasonable steps to assist Ocera in obtaining any such patent term extension, restoration or supplemental protection, including by providing Ocera with copies of any Information Controlled by UCL which is reasonably necessary or useful in connection therewith; provided that Ocera will first discuss with UCL and consider in good faith any reasons for not seeking such patent term extension, restoration or supplemental protection. In the event and to the extent Ocera declines to exercise its right in respect of any patent, whether any patent within the UCL Patents or any other patent relating to a Licensed Product, UCL shall have the right, at its own expense, to make the election to seek the relevant patent term extension, restoration or supplemental protection, and Ocera shall abide by such election and shall take reasonable steps to assist UCL in obtaining any such patent term extension, restoration or supplemental protection, including by providing UCL with copies of any Information Controlled by Ocera which is reasonably necessary or useful in connection therewith; provided that UCL will first discuss with Ocera and consider in good faith any reasons for not seeking such patent term extension, restoration or supplemental protection.

**5.3 Infringement by Third Parties** . UCL and Ocera shall promptly notify the other in writing of any alleged or threatened infringement of any UCL Patent of which they become aware. Ocera shall have the first right to bring and control any action or proceeding with respect to infringement of any of the UCL Patents in the Territory at its own expense and by counsel of its own choice, and UCL shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Ocera fails to bring an action or proceeding within (a) 90 days following the notice of alleged infringement or (b) 10 days before the time limit, if any, set forth in the appropriate laws and regulations for the filing of such actions, whichever comes first, UCL shall have the right to bring and control any such action at its own expense and by counsel of its own choice, and Ocera shall have the right, at its own expense, to be represented in any such action by counsel of its own choice; provided that UCL will first discuss with Ocera and consider in good faith any reasons for not bringing such an action. The party that brings and controls such action or proceeding shall keep the other party updated regarding the status and costs of such action or proceeding. In no event shall either party admit the invalidity of, or after exercising its right to bring and control an action under this Section 5.3, fail to defend the validity of, any UCL Patent without the other party's prior written consent. Neither party shall have the right to settle any patent infringement litigation under this Section 5.3 relating to any UCL Patent without the prior written consent of the other party, which shall not be unreasonably withheld. Except as otherwise agreed by the parties as part of a cost-sharing arrangement, any recovery obtained by either party in connection with or as a result of any action contemplated by this Section 5.3, whether by settlement or otherwise, shall be shared in order as follows: (i) the party that initiated and prosecuted the action shall recoup all of its costs and expenses incurred in connection with the action; (ii) the other party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action; (iii) where Ocera initiated and prosecuted the action, any remaining amounts after such reimbursement of the parties' costs and expenses that are attributable to lost sales or lost profits with respect to Licensed Products shall be treated as Net Sales of Licensed Products for purposes

of this Agreement; and (iv) any other remaining amounts after such reimbursement of the parties' costs and expenses shall belong to the party that brought and controlled such action. Where any party to any patent infringement litigation contemplated by this Section 5.3 counterclaims for revocation of any of the UCL Patents then, where Ocera has initiated and prosecuted such litigation, Ocera shall notify UCL of such counterclaims and Section 5.4 shall apply in respect of such counterclaims.

**5.4 Revocation.** UCL and Ocera shall promptly notify the other in writing of the commencement of any proceeding where the validity of any of the UCL Patents is at issue, including opposition proceedings in respect of European patents and interference proceedings in respect of US patents ( "**Revocation Proceedings** "). Ocera shall have the first right but not the obligation to defend the Revocation Proceedings. If Ocera does not wish to defend or continue to defend Revocation Proceedings then Ocera shall notify UCL and UCL may at its own cost and expense defend or continue to defend such Revocation Proceedings; provided that UCL will first discuss with Ocera and consider in good faith any reasons for not defending or continuing to defend the Revocation Proceedings. Each party shall provide, subject to the availability of suitably qualified staff, with such assistance as the other party shall reasonably request in connection with any Revocation Proceedings (providing the requesting party agrees to pay the other party's reasonable out-of-pocket expenses properly incurred in providing the requested assistance). For the avoidance of doubt, in no circumstances shall either party be required to refund any payments previously made under this Agreement including in the case where a UCL Patent is wholly or partly revoked, cancelled or otherwise cease to be in force.

**5.5 Infringement of Third Party Rights.** Each party shall promptly notify the other in writing of any allegation by a Third Party that the activities pursuant to this Agreement infringe or may infringe the intellectual property rights of such Third Party. UCL shall have the sole right to control any defense of any such claim involving alleged infringement of Third Party rights by UCL's activities at its own expense and by counsel of its own choice, and Ocera shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. Ocera shall have the sole right to control any defense of any such claim involving alleged infringement of Third Party rights by Ocera's activities at its own expense and by counsel of its own choice, and UCL shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. Neither party shall have the right to settle any patent infringement litigation under this Section 5.5 in a manner that diminishes the rights or interests of the other party without the written consent of such other party, which shall not be unreasonably withheld.

## **6. REPRESENTATIONS AND WARRANTIES**

**6.1 Mutual Representations and Warranties .** Each party represents and warrants to the other that: (a) it is duly organized and validly existing under the laws of its jurisdiction of incorporation or formation, and has full corporate or other power and authority to enter into this Agreement and to carry out the provisions hereof; (b) it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the person or persons executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate or partnership action; and (c) this Agreement is legally binding upon it, enforceable in accordance with its terms,

and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

**6.2 UCL Representations and Warranties** . UCL represents and warrants to Ocera that, as of the Effective Date:

- (a) UCL is the sole owner of all UCL Patents and any rights in the UCL Know-How.
- (b) UCL has the right, power and authority to grant the licenses contemplated under this Agreement.

(c) To UCL's knowledge, without having made any searches or enquiries, the practice of the UCL Technology to develop or commercialize Compounds or Licensed Products in the Field in the Territory by UCL or its Affiliates prior to the Effective Date does not infringe any issued Patents of any Third Party, and UCL has received no written notice, and does not have knowledge of any threat or claim, of infringement or misappropriation of any alleged rights asserted by any Third Party against UCL or any of its Affiliates in relation to the UCL Technology.

(d) To UCL's knowledge, without having made any searches or enquiries, there is no Information that UCL or any of its Affiliates Controls which relates directly to the Compound in the Field in the Territory other than the UCL Know-How.

(e) All inventors of any inventions claimed by the UCL Patents were employees or contractors of UCL or its Affiliate at the time such invention was made and have an obligation to assign their entire right, title and interest in and to such inventions and the corresponding UCL Patents to UCL, and, to UCL's knowledge, no person, other than those persons named as inventors in any UCL Patents, is an inventor of the invention(s) claimed in such UCL Patents.

(f) UCL has not received written notice concerning the institution or possible institution of any interference, reexamination, reissue, revocation or nullification proceeding involving any UCL Patents.

For the purposes of this Section 6.2, "UCL's knowledge" shall be limited to the actual knowledge as at the Effective Date of the Business Managers and Directors of UCL.

**6.3 Disclaimer** . Except as expressly set forth herein, THE COMPOUNDS, TECHNOLOGY AND INTELLECTUAL PROPERTY RIGHTS PROVIDED HEREUNDER ARE PROVIDED "AS IS" AND EACH PARTY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF DESIGN, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICES, IN ALL CASES WITH RESPECT THERETO. Without limiting the generality of the foregoing, each party expressly does not warrant (a) the success of any Compound

or Licensed Product or (b) the safety or usefulness for any purpose of the technology it provides hereunder.

**6.4 Limitation of Liability** . EXCEPT FOR PAYMENTS UNDER SECTION 3 OR LIABILITY FOR BREACH OF SECTION 7, NEITHER PARTY SHALL BE ENTITLED TO RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT OR ANY LICENSE GRANTED HEREUNDER; *provided, however,* that this Section 6.4 shall not be construed to limit Ocera's indemnification obligations under Section 9.1. Except for liability for breach by UCL of its obligations with respect to the license granted to Ocera under Section 2.1, or for breach by UCL of Section 7, UCL's liability, whether arising under this Agreement or arising in relation to any activities contemplated by this Agreement, shall to the maximum extent permitted by all applicable law, not exceed \$10 million or the total amount received by UCL under this Agreement as of the date of any claim, whichever is greater.

**6.5** Notwithstanding anything to the contrary in Section 6.4, nothing in this Agreement limits or excludes either party's liability for (a) death or personal injury or (b) fraud.

## **7. CONFIDENTIALITY**

**7.1 Confidential Information** . Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the parties, the parties agree that, during the Term and thereafter, the receiving party shall keep confidential and shall not publish or otherwise disclose and shall not use for any purpose other than as expressly provided for in this Agreement any Information furnished to it by the other party pursuant to this Agreement or the Nondisclosure Agreement, whether in oral, written, graphic or electronic form (collectively, "Confidential Information"). Each party may use such Confidential Information only to the extent required to accomplish the purposes of this Agreement. Each party will use at least the same standard of care as it uses to protect proprietary or confidential information of its (but no less than reasonable care) own to ensure that its employees, agents, consultants and other representatives do not disclose or make any unauthorized use of the Confidential Information. Each party will promptly notify the other upon discovery of any unauthorized use or disclosure of the Confidential Information.

**7.2 Exceptions** . Confidential Information shall not include any information which the receiving party can prove by competent written evidence: (a) is now, or hereafter becomes, through no act or failure to act on the part of the receiving party, generally known or available; (b) is known by the receiving party at the time of receiving such information, as evidenced by its records; (c) is hereafter furnished to the receiving party by a Third Party, as a matter of right and without restriction on disclosure; or (d) is the subject of a written permission to disclose provided by the disclosing party.

**7.3 Authorized Disclosure** . Each party may disclose Confidential Information belonging to the other party to the extent such disclosure is reasonably necessary in the following instances:

- (a) filing or prosecuting Patents as permitted by this Agreement;

- (b) regulatory filings for Licensed Products by Ocera and its Sublicensees;
- (c) prosecuting or defending litigation as permitted by this Agreement;
- (d) complying with applicable court orders or governmental regulations;

(e) disclosure to Affiliates, Sublicensees, employees, consultants and agents in connection with performance of activities contemplated by this Agreement or to other Third Parties in connection with due diligence or similar investigations by such Third Party relating to this Agreement, including, without limitation, disclosure to potential Third Party investors in confidential financing documents, provided, in each case, that any such Affiliate, Sublicensee, employee, consultant, agent or Third Party agrees to be bound by at least equivalent terms of confidentiality and non-use to those set forth in this Section 7.

Notwithstanding the foregoing, in the event a party is required to make a disclosure of the other party's Confidential Information pursuant to Section 7.3(c) or (d), it will, except where impracticable, give reasonable advance notice to the other party of such disclosure, take into account the reasonable requests of the other party in relation to the content of such disclosure, and use efforts to secure confidential treatment of such information at least as diligent as such party would use to protect its own confidential information, but in no event less than reasonable efforts. In any event, the parties agree to take all reasonable action to avoid disclosure of Confidential Information hereunder. The parties will consult with each other on the provisions of this Agreement to be redacted in any filings made by the parties with the Securities and Exchange Commission or as otherwise required by applicable laws, rules or regulations.

**7.4 Publications** . Each party to this Agreement recognizes that the publication of papers regarding results of and other information regarding research or development activities with respect to the Compound and Licensed Products, including oral presentations and abstracts, may be beneficial to both parties provided such publications are subject to reasonable controls to protect Confidential Information. Accordingly, a party shall have the right to review and comment on any material proposed for disclosure or publication by the other party, such as by oral presentation, manuscript or abstract, which includes information related to (i) the Compound and/or Licensed Products to the extent that such material is proposed for disclosure by Professor Rajiv Jalan and the members of his research team working at the University or (ii) any Confidential Information of such party. Before any such material is submitted for publication, the party proposing publication shall deliver a complete copy to the other party at least 30 days prior to submitting the material to a publisher or initiating any other disclosure. Such other party shall review any such material and give its comments to the party proposing publication within 15 days of the delivery of such material to such other party. With respect to oral presentation materials and abstracts, such other party shall make reasonable efforts to expedite review of such materials and abstracts, and shall return such items as soon as practicable to the party proposing publication with appropriate comments, if any, but in no event later than 15 days from the date of delivery to the non-publishing party. The publishing party shall comply with the other party's request to delete references to the Confidential Information in any such material and agrees to delay any submission for publication or other public disclosure for a period of up to an additional 90 days for the purpose of preparing and filing appropriate patent applications.

**7.5 Publicity** . It is understood that the parties intend to coordinate the issuance of press releases announcing the execution of this Agreement and agree that each party may desire or be required to issue subsequent press releases relating to this Agreement or activities hereunder. The parties agree to consult with each other reasonably and in good faith with respect to the text and timing of such press releases prior to the issuance thereof, provided that a party may not unreasonably withhold consent to such releases and shall provide comments on such releases within five days of receipt, and that either party may issue such press releases as it determines, based on advice of counsel, are reasonably necessary to comply with laws or regulations or for appropriate market disclosure. In addition, following the initial press releases announcing this Agreement, either party shall be free to disclose, without the other party's prior written consent, the existence of this Agreement, the identity of the other party and those terms of the Agreement which have already been publicly disclosed in accordance herewith. Ocera shall not use the name or logo of UCL or the University in any press release or product advertising, or for any other promotional purpose, without first obtaining UCL's written consent; provided that Ocera need only obtain prior written consent one time for disclosure of the name or logo of UCL or the University for use in a particular context and where the name or logo of UCL or the University is being used in the same way as has previously been approved by UCL.

## **8. TERM AND TERMINATION**

**8.1 Term** . The term of this Agreement (the "Term") shall commence on the Effective Date and continue in each country in the Territory until the expiration of the last Royalty Term in such country, unless earlier terminated in accordance with Section 8.2. After the expiration of this Agreement, on a country-by-country basis, in each country in the Territory, Ocera will retain the licenses granted under Section 2.1, except that such licenses shall be fully paid-up and royalty-free. For the avoidance of doubt, such fully paid up and royalty free licences only apply upon expiration of this Agreement as opposed to earlier termination under Section 8.2.

### **8.2 Termination** .

(a) **Termination for Cause**. Each party shall have the right to terminate this Agreement upon 60 days' prior written notice to the other party upon the occurrence of any of the following:

(i) Upon or after (1) an order is made or a resolution is passed for the winding up of the other party (other than a dissolution or winding up for the purpose of reconstruction or amalgamation), (2) a liquidator, administrative receiver, receiver, or trustee is appointed in respect of a material part of the other party's assets or business, (3) as a consequence of financial difficulties the other party makes or proposes any voluntary arrangement with its creditors, (4) the other party ceases to continue its business, (5) the other party becomes unable to pay its debts as and when they fall due or (6) as a consequence of debt and/or maladministration, the other party takes or suffers any similar or analogous action to those listed in (1) - (5) above; or

(ii) Upon or after the breach of any material provision of this Agreement by the other party if the breaching party has not cured such breach where it is capable of being cured within the 60-day period following written notice of termination by the non-breaching party. Material

provisions shall for the purposes of this Subsection 8.2(a)(ii) include without limitation Sections 2.1, 2.2, 2.6, 2.7, 2.8, 3.1, 3.2, 3.3, 3.5, 4.1, 4.2, 4.4, 4.5, 5, 7, 8.3, 9.1, 9.2, 10.1 and 10.6.

(b) **Termination by Ocera** . Ocera shall have the right to terminate this Agreement for any reason upon 90 days' prior written notice to UCL.

(c) **Termination by UCL** . Without prejudice to any other right or remedy, UCL shall have the right to terminate this Agreement if Ocera or any of its Sublicensees or Affiliates challenge, petition to revoke, oppose or otherwise dispute, or directly or indirectly assist any Third Party to challenge, petition to revoke, oppose or otherwise dispute, the validity and/or scope of any of the UCL Patents including the validity of any of the claims of the UCL Patents.

### **8.3 Effect of Termination; Surviving Obligations.**

(a) Upon termination of this Agreement for any reason:

(i) except as otherwise provided in Section 8.3(a)(ii), all rights under the license granted by UCL to Ocera under Section 2.1 shall automatically terminate and revert to UCL;

(ii) UCL shall, and it hereby does, grant to Ocera a fully-paid, perpetual, irrevocable, worldwide, exclusive, royalty-free license, with the right to sublicense and further sublicense, to use the Licensed Results (as defined in clause 4.4 of the Collaboration Agreement) for any and all uses and UCL shall provide to Ocera copies of any materials forming part of the Licensed Results in its possession to the extent such materials are reasonably necessary in order to enable the practice of such license;

(iii) any Sublicence Agreements granted under Section 2.8 by Ocera shall remain in effect, but shall be assigned to UCL;

(iv) Ocera shall return all UCL Know-How in its possession (except for any and all UCL Know-How to which Ocera retains a license under Section 8.3(a)(ii)) to UCL within 60 days of such termination;

(v) UCL shall have the option to acquire from Ocera, subject to the negotiation of mutually agreeable terms, all regulatory approvals, clinical data and other similar information and items related to the Compound and Licensed Product owned by Ocera; and

(vi) Ocera shall within 30 days following expiry or termination pay to UCL all sums due to it under this Agreement in respect of the period up to and including the date of expiration or termination, including without limitation any sums due pursuant to Sections 2.4 and 3.

(b) Following the expiration of the Term under Section 8.1, Ocera will retain the licenses granted to it under Section 2, except that all such licenses shall be fully paid and irrevocable.

(c) Expiration or termination of this Agreement shall not relieve the parties of any obligation accruing prior to such expiration or termination. Except as otherwise provided herein,

the provisions of Section 1, 3 (to the extent sums remain payable), 2.9, 2.10, 3.6, 4, 5.5, 6.3, 6.4, 6.5, 7.1, 7.2, 7.3, 7.5, 8.3, 8.4, 8.5, 9 and 10 shall survive the expiration or termination of this Agreement. In addition, Section 8.1 shall survive any expiration of this Agreement. Termination of this Agreement shall not limit any other rights and remedies of the parties.

(d) Within 30 days following the expiration or termination of this Agreement, except to the extent and for so long as a party retains license rights under Section 8.3(a) or (b), each party shall deliver to the other party any and all Confidential Information of the other party in its possession.

**8.4 Exercise of Right to Terminate** . The use by either party hereto of a termination right provided for under this Agreement shall not give rise to the payment of damages or any other form of compensation or relief to the other party with respect thereto.

**8.5 Damages; Relief** . Subject to Section 8.4 above, termination of this Agreement shall not preclude either party from claiming any other damages, compensation or relief that it may be entitled to upon such termination.

## **9. INDEMNIFICATION**

**9.1 Indemnification by Ocera** . Ocera hereby agrees to save, defend and hold UCL and its Affiliates and their respective directors, officers, employees and agents (each, a “ *UCL Indemnitee* ”) harmless from and against any and all demands, liabilities, expenses and/or loss, including reasonable legal expense and attorneys’ fees (collectively, “ *Losses* ”) to which any UCL Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Third Party to the extent such Losses arise directly or indirectly out of: (i) the practice by Ocera of any license granted to it under Section 2.1; or (ii) the manufacture, use, handling, storage, sale or other disposition of any Licensed Product by Ocera or any of its Sublicensees; except, in each case, to the extent such Losses result from the negligence or willful misconduct of any UCL Indemnitee or the breach by UCL of any material warranty, representation, covenant or agreement made by UCL in this Agreement.

**9.2 Insurance** . Ocera shall effect and maintain at its own expense comprehensive general commercial liability insurance (including product liability coverage for the Licensed Products), in the sum of not less than US \$1,000,000 per claim and US \$5,000,000 in aggregate. Ocera shall at its own expense increase the value and scope of its insurance as necessary to provide coverage for its development and commercialization of the Licensed Products, consistent with industry standards. The insurance required under this Section 9.2 shall be effected and maintained to ensure that Ocera is covered at all times under such insurance during the Term relating to the Licensed Products. Annually, Ocera shall promptly provide to UCL a certificate of insurance reflecting that the insurance coverage required under this Article 9.2 is in effect. If Ocera fails to comply with its obligations under this Section 9.2 then UCL may obtain any such insurance and Ocera shall pay UCL the cost thereof on demand.

**9.3 Control of Defense** . Any entity entitled to indemnification under this Section 9 shall give notice to the indemnifying party of any Losses that may be subject to indemnification, promptly after learning of such Losses, and the indemnifying party shall assume the defense of such

Losses with counsel reasonably satisfactory to the indemnified party. If such defense is assumed by the indemnifying party with counsel so selected, the indemnifying party will not be subject to any liability for any settlement of such Losses made by the indemnified party without its consent (but such consent will not be unreasonably withheld or delayed), and will not be obligated to pay the fees and expenses of any separate counsel retained by the indemnified party with respect to such Losses.

## **10. GENERAL PROVISIONS**

### **10.1 Dispute Resolution.**

- a. In the event of any controversy or claim arising out of, relating to or in connection with any provision of this Agreement, the parties shall try to settle their differences amicably between themselves first, by referring the disputed matter to the Chief Executive Officer of Ocera and the Managing Director of UCL. Either party may initiate such informal dispute resolution by sending written notice of the dispute to the other party, and, within 15 days after such notice (or such longer period as may be agreed by the parties), such representatives of the parties shall meet for attempted resolution by good faith negotiations.
- b. If the representative of the parties have not been able to resolve the dispute within 15 days after such meeting or if the representatives of either party will not meet the other, then, any and all claims, disputes or controversies arising under, out of, or in connection with this Agreement, shall be referred to and resolved by final and binding compulsory arbitration in London, England (or other location agreed in writing by the parties) pursuant to and in accordance with the then-current rules of the London Court of International Arbitration.
- c. The arbitration shall be conducted by one arbitrator to be mutually agreed upon by the parties. Within 15 days after the reference of the dispute to binding arbitration, the parties shall select one person to act as the arbitrator; *provided, however*, that if the parties are unable to agree upon an arbitrator within 15 days after the reference of the dispute to binding arbitration, then the arbitrator shall be appointed in accordance with the rules of the London Court of International Arbitration.
- d. Either party may apply to the arbitrator for interim injunctive relief until the arbitrator has rendered his or her award or the controversy is otherwise resolved. Either party may also, without waiving any remedy under this Agreement, seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that party pending the arbitrator's decision.
- e. The arbitrator shall have no power to add to, subtract from or modify any of the terms or conditions of this Agreement, nor to award punitive damages. The arbitrator may award compound interest at commercial rates. The arbitrator may also award interim relief and grant specific performance.

- f. Any award rendered in such arbitration shall be in writing and state the reasons upon which it is based and shall be final and binding on the parties, who undertake to carry it out without recourse to any judicial proceedings in any jurisdiction whatsoever seeking annulment, setting aside, modification or any diminution or impairment of its terms or effect.
- g. Each party shall bear its own costs and expenses and attorneys' fees and an equal share of the arbitrator's fees and any administrative fees of arbitration, provided that the arbitrator shall be authorized to determine whether a party is the prevailing party, and if so, to award to that prevailing party reimbursement for its reasonable costs and expenses, including reasonable attorneys' fees, in connection with arbitration of such controversy or claim.
- h. By agreeing to this binding arbitration provision, the parties understand that they are waiving certain rights and protections which may otherwise be available if a dispute between the parties were determined by litigation in court, including, without limitation, the right to seek or obtain certain types of damages precluded by this provision, the right to a jury trial and certain rights of appeal.
- i. Notwithstanding anything to the contrary in this Section 10.1, any dispute, controversy or claim that concerns (a) the validity or infringement of a patent, trademark or copyright, (b) any antitrust, anti-monopoly or competition law or regulation, whether or not statutory, shall not be subject to the arbitration provisions of this Section 10.1 and shall be subject to the exclusive jurisdiction of the courts of England and Wales.

**10.2 Governing Law** . This Agreement shall be governed by, and construed and enforced in accordance with, the laws of England and Wales, excluding its conflicts of laws principles.

**10.3 Entire Agreement; Modification** . This Agreement is both a final expression of the parties' agreement and a complete and exclusive statement with respect to all of its terms. This Agreement supersedes all prior and contemporaneous agreements and communications, whether oral, written or otherwise, concerning any and all matters contained herein, including the Nondisclosure Agreement and the Original Agreement, but excluding the Collaboration Agreement. Each party acknowledges that, in entering into this Agreement, it has not relied on, and shall have no right or remedy in respect of, any statement, representation, assurance or warranty (whether made negligently or innocently) other than as expressly set out in this Agreement. Each party waives all rights and remedies which, but for this Section 10.3, might otherwise be available to it in respect of such statement, representation, assurance or warranty. Nothing in this Section 10.3 shall limit or exclude any liability for fraud. This Agreement may only be modified or supplemented in a writing expressly stated for such purpose and signed by the parties to this Agreement.

**10.4 Relationship Between the Parties** . The parties' relationship, as established by this Agreement, is solely that of independent contractors. This Agreement does not create any partnership, joint venture or similar business relationship between the parties. Neither party is a legal representative of the other party, and neither party can assume or create any obligation, representation, warranty or guarantee, express or implied, on behalf of the other party for any purpose whatsoever.

**10.5 Non-Waiver** . The failure of a party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a party of a particular provision or right shall be in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such party.

**10.6 Assignment** . Except as expressly provided hereunder, neither this Agreement nor any rights or obligations hereunder may be assigned or otherwise transferred by either party without the prior written consent of the other party (which consent shall not be unreasonably conditioned, delayed or withheld); *provided, however* , that Ocera may assign this Agreement and its rights and obligations hereunder without UCL's consent in connection with the transfer or sale of all or substantially all of the business of Ocera relating to Licensed Products to a Third Party, whether by merger, sale of stock, sale of assets or otherwise.

The rights and obligations of the parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties. Any assignment not in accordance with this Agreement shall be void.

**10.7 No Third Party Beneficiaries** . This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it, and the Contract (Rights of Third Parties) Act 1999 shall not apply to this Agreement save that the University shall be entitled to

enforce Section 9.2. Notwithstanding the foregoing, the consent of the University shall not be required in the event that the parties vary or terminate this agreement by mutual agreement.

**10.8 Severability** . If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, such adjudication shall not affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement. All remaining portions shall remain in full force and effect as if the original Agreement had been executed without the invalidated, unenforceable or illegal part.

**10.9 Notices** . Any notice to be given under this Agreement must be in writing and delivered either in person, by any method of mail (postage prepaid) requiring return receipt, or by overnight courier or facsimile confirmed thereafter by any of the foregoing, to the party to be notified at its address(es) given below, or at any address such party has previously designated by prior written notice to the other. Notice shall be deemed sufficiently given for all purposes upon the earliest of: (a) the date of actual receipt; (b) if mailed, five days after the date of postmark; or (c) if delivered by overnight courier, the next business day the overnight courier regularly makes deliveries.

If to Ocera, notices must be addressed to:

Ocera Therapeutics, Inc.  
525 University Avenue, Suite 610  
Palo Alto, CA 94301  
United States of America  
Attention: Chief Executive Officer  
Telephone: (650) 475 0158  
Facsimile: (650) 521 5677

If to UCL, notices must be addressed to:

UCL Business PLC  
97 Tottenham Court Road  
London, W1T 4TP  
England  
Attention: Managing Director  
Telephone: + 44 (0) 20 7679 9000  
Facsimile: + 44 (0) 20 7679 9838

**10.10 Force Majeure.** Each party shall be excused from liability for the failure or delay in performance of any obligation under this Agreement by reason of any event beyond such party's reasonable control including but not limited to acts of God, fire, flood, explosion, earthquake, or other natural forces, war, civil unrest, accident, destruction or other casualty, any lack or failure of transportation facilities or any other event similar to those enumerated above. Such excuse from liability shall be effective only to the extent and duration of the event(s) causing the failure or delay in performance and provided that the party has not caused such event(s) to occur. Notice of a party's failure or delay in performance due to force majeure must be given to the other party within 10 days after its occurrence. All delivery dates under this Agreement that have been affected by force

majeure shall be tolled for the duration of such force majeure. In no event shall any party be required to prevent or settle any labor disturbance or dispute. Notwithstanding the foregoing, should the event(s) of force majeure suffered by a party extend beyond a three-month period, the other party may then terminate this Agreement by written notice to the non-performing party, with the consequences of such termination as set forth in Sections 8.3, 8.4 and 8.5.

#### **10.11 Interpretation.**

(a) **Captions & Headings.** The captions and headings of clauses contained in this Agreement preceding the text of the articles, sections, subsections and paragraphs hereof are inserted solely for convenience and ease of reference only and shall not constitute any part of this Agreement, or have any effect on its interpretation or construction.

(b) **Singular & Plural; Interpretation of Other Terms .** All references in this Agreement to the singular shall include the plural where applicable, and all references to gender shall include both genders and the neuter. Use of the word “including” in this Agreement shall be deemed to be followed by the phrase “without limitation” or like expression and shall not be construed to limit any general statement which it follows to the specific or similar items or matters immediately following it. Each accounting term used herein that is not specifically defined herein shall have the meaning given to it under GAAP consistently applied, but only to the extent consistent with its usage and the other definitions in this Agreement.

(c) **Articles, Sections & Subsections .** Unless otherwise specified, references in this Agreement to any article shall include all sections, subsections, and paragraphs in such article; references in this Agreement to any section shall include all subsections and paragraphs in such sections; and references in this Agreement to any subsection shall include all paragraphs in such subsection.

(d) **Days .** All references to days in this Agreement shall mean calendar days, unless otherwise specified.

(e) **Ambiguities .** Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against either party, irrespective of which party may be deemed to have caused the ambiguity or uncertainty to exist.

(f) **English Language .** This Agreement has been prepared in the English language and the English language shall control its interpretation. In addition, all notices required or permitted to be given hereunder, and all written, electronic, oral or other communications between the parties regarding this Agreement shall be in the English language.

(g) **Counterparts; Facsimile .** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original document, and all of which, together with this writing, shall be deemed one instrument. This Agreement may be executed and delivered by facsimile and upon such delivery the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

**[Remainder of this page intentionally left blank.]**

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

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**IN WITNESS WHEREOF**, the parties hereto have duly executed this Second Amended and Restated **LICENSE AGREEMENT** as of the date first written above.

**UCL BUSINESS PLC**

**OCERA THERAPEUTICS, INC.**

By: /s/ Dr. Anne Lane      By: /s/ Gaurav Aggarwal  
Name: Dr. Anne Lane      Name: Gaurav Aggarwal  
Title: Executive Director      Title: Chief Business Officer





**EXHIBIT B**

**UCL Know-How**

All the UCL Know how has been provided to Ocera as part of the due diligence documents sent in August 2008. These can be classified as follows:

- a. Published information, relating to the background. [See Publications section of the due diligence package]
- b. Grant Applications to study L-ornithine Phenylacetate. [See MRC Award for clinical trials section of the due diligence package]
- c. Published information specifically relating to the technology: [See Publications section of the due diligence package; Academic Papers: PUB7; and folder: Abstracts and Presentations] [See POC Clinical Trials section of the due diligence package].
- d. Unpublished information on the subject which has been submitted but awaiting resubmission. [See Animal Studies section of the due diligence package].
- e. Data referring to technology that have been presented at meetings. [See Publications section of the due diligence package; Abstracts and Presentations]
- f. Data with respect to the OP salt: [See Regarding New Salt section of the due diligence package]
- g. On-going but still incomplete studies:

**1. Evaluation of OP vs Placebo in a rat model of Cirrhosis. [Funding: Liver Failure Labs, UCLB]**

- a. Submitted to Hepatology. Comments to extend the model to 10 days to show effect and neuropsychological tests
  - i. Studies extended to 10 days, demonstration of synergy and persistent ammonia reduction [approx 50 rats]
  - ii. Neuropsychological studies underway [12 rats]
  - iii. TO DO: Amino acids and Phenylacetylglutamine
  - iv. Resubmit paper by end Nov. 2008

**2. Evaluation of OP vs Placebo in a devascularised pigs [Funding: Liver Failure Labs and Norwegian Medical research council]**

- a. On going studies/to finish
  - i. Interorgan Metabolism of ammonia and amino acids
  - ii. Brain Histology
  - iii. Brain Microdialysis
  - iv. White matter vs Grey matter
  - v. Discovery: LCMS and NMR spectroscopy

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

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**3. OP vs Placebo in Cirrhotic Rats [PK/PD study] [Funding: UCLB]**

- a. On-going: Aim to determine best dose and combination of administration [n=48]
- b. End Points: Ammonia, Amino acid; PAG; Brain Water
  - i. Single Bolus
  - ii. Bolus followed by Infusion for 6 hours
  - iii. Bolus followed by infusion for 16 hours
  - iv. Bolus followed by Infusion for 24 hours
  - v. O:P: 1:1
  - vi. O:P: 2:1
  - vii. O:P: 1:2
  - viii. Total dose: 0.1; 0.3 and 0.6 gm/Kg
- c. Effectiveness
  - i. Neuropsychology

**4. Inflammation, Ammonia and the Brain**

- a. Study in Cirrhotic rats treated with LPS. Randomised to OP, OP + Infliximab; OP alone or Infliximab alone
- b. N=24 rats
- c. It may be worth considering trialing AST 120 either by itself or together with OP in this model.
- d. Data needs analysis

**EXHIBIT C**

**Consultation Rates**

We provide a range of consultancy rates to reflect various UCL or University employees that may be required to provide Ocera with further assistance beyond that agreed in 2.6. All such additional work will have the prior written approval of Ocera so that UCL and Ocera can discuss the level of expertise and materials required by Ocera.

A per day (p. d.) rate is calculated as 7 hrs and includes overheads. Technician through to Research Associate £200 - £400 p. d., Junior to Senior Lecturer £600-800 p. d., Reader £1000 p.d, Professor £1,250 to £1,500 p.d.

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

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**Exhibit D**

**Royalty Statements**

1. In respect of each country where Licensed Products were supplied during a Calendar Quarter:-
  - 1.1. the Net Sales of each type of Licensed Product supplied expressed both in local currency and in U.S. Dollars together with conversion rates used;
  - 1.2. the royalty rate applicable to each type of Licensed Product supplied in that country;
  - 1.3. the calculation of the royalties payable in respect of each type of Licensed Product; and
  - 1.4. the total amount of royalties payable in respect of that country;
2. For the world as a whole:-
  - 2.1. the total amount of royalties payable under Section 3.3;
  - 2.2. the amount of any deduction made pursuant to Sections 1.24, 3.3 and 3.4; and
  - 2.3. the amount of any withholding tax deducted pursuant to Section 4.4.
3. In respect of any Licensed Products sold or disposed of between or among Ocera and its Affiliates for resale or supplied in any other circumstances other than an arm's-length transaction exclusively for money, pursuant to Section 1.24:-
  - 3.1. the amount of each type of Licensed Product supplied; and
  - 3.2. the actual price at which the Licensed Products were supplied and the nature and value of any other consideration provided for the Licensed Products.

**Exhibit E**  
**Experts Procedure**

1. Any dispute arising out of or in connection with Section 1.24 of this Agreement and/or its performance shall be referred to an expert by either party serving on the other party notice (“Referral Notice”) that it wishes to refer the dispute to an expert
2. The dispute shall be determined by a single independent impartial expert who shall be agreed between the parties or, in the absence of agreement between the parties within 30 days of the service of a Referral Notice, be appointed by the then President of the Institute of Chartered Accountants or any successor organisation thereto.
3. 30 days after the appointment of the expert pursuant to paragraph 2 both parties shall exchange simultaneously statements of case in no more than 10,000 words, in total, and each side shall simultaneously send a copy of its statement of case to the expert.
4. Each party may, within 30 days of the date of exchange of statement of case pursuant to paragraph 3, serve a reply to the other side's statement of case in no more than 10,000 words. A copy of any such reply shall be simultaneously sent to the expert.
5. Subject to paragraph 8, there shall be no oral hearing. The expert shall issue his decision in writing to both parties within 30 days of the date of service of the last reply pursuant to paragraph 4 above or, in the absence of receipt of any replies, within 60 days of the date of exchange pursuant to paragraph 3.
6. The seat of the dispute resolution shall be the normal place of residence of the expert.
7. The language of the dispute resolution shall be English.
8. The expert shall not have power to alter, amend or add to the provisions of this Agreement, except that the expert shall have the power to decide all procedural matters relating to the dispute, and may call for a one day hearing if desirable and appropriate.
9. The expert shall have the power to request copies of any documents in the possession and/or control of the parties which may be relevant to the dispute. The parties shall forthwith provide to the expert and the other party copies of any documents so requested by the expert.
10. The expert shall decide the dispute as an expert and not as an arbitrator.
11. The decision of the expert shall be final and binding upon both parties except in the case of manifest error. The parties hereby exclude any rights of application or appeal to any court, to the extent that they may validly so agree, and in particular in connection with any question of law arising in the course of the reference out of the award.

12. The expert shall determine the proportions in which the parties shall pay the costs of the expert's procedure. The expert shall have the authority to order that all or a part of the legal or other costs of a party shall be paid by the other party.
13. All documents and information disclosed in the course of the expert proceedings and the decision and award of the expert shall be kept strictly confidential by the recipient and shall not be used by the recipient for any purpose except for the purposes of the proceedings and/or the enforcement of the expert's decision and award.
14. The parties shall not, and shall procure that their respective Affiliates and Sublicensees shall not, make any announcement, or comment upon, or originate any publicity, or otherwise provide any information to any Third Party (other than its legal advisors) concerning the experts proceedings including the fact that the parties are in dispute, the existence of the experts proceedings, and/or any decision or award of the expert.

**EXHIBIT F**  
**UCL NAFLD Patents**

<b>Country:</b>	<b>Status:</b>	<b>Application No.</b>	<b>Filing Date:</b>
[***]	[***]	[***]	[***]

\* Confidential Information, indicated by [\*\*\*], has been omitted from this filing and filed separately with the Securities and Exchange Commission.

## OCERA THERAPEUTICS, INC.

NON-EMPLOYEE DIRECTOR COMPENSATION POLICYAs Amended and Restated

April 23, 2015

The purpose of this Non-Employee Director Compensation Policy, as amended and restated (this “Policy”), of Ocera Therapeutics, Inc., a Delaware corporation (the “Company”), is to provide a total compensation package that enables the Company to attract and retain, on a long-term basis, high caliber directors on the Company's Board of Directors (the “Board”) who are not employees or officers of the Company or its subsidiaries. This Policy will become effective as of the date this Policy is approved by the Board (the “Effective Date”).

In furtherance of this purpose, following the Effective Date, all non-employee Directors shall be paid cash compensation for services provided to the Company as set forth below.

	<b>Annual Amount</b>
Annual Retainer for each Board Member:	\$30,000
Additional Retainer for the Chairman of the Board:	\$25,000
Additional Retainer for Lead Independent Director	\$20,000
Audit Committee Chair:	\$15,000
Other Audit Committee Members:	\$7,500
Compensation Committee Chair:	\$10,000
Other Compensation Committee Members:	\$5,000
Nominating and Corporate Governance Committee Chair:	\$8,000
Other Nominating and Corporate Governance Committee Members:	\$4,000

Additionally, the non-employee Directors shall be eligible to participate in the Company's stock option plans on a case by case basis as follows:

(a) Welcome Grants. Following the Effective Date, each person who is thereafter first appointed or first elected to the Board as a non-employee Director, is or will be eligible to receive a one-time option grant of an option to purchase 20,000 shares of the Company's common stock (the “Welcome Grant”). All non-employee Directors who are first appointed or first elected to the Board after the Effective Date shall receive his or her Welcome Grant promptly following the date that he or she is so appointed or elected to the Board, upon Board approval thereof. All Welcome Grants shall vest, as to 25% of the shares initially covered by such stock option, on the first anniversary date of the date of grant thereof with the balance of the shares subject thereto to vest in equal monthly installments over the next succeeding three year

period, provided, in all cases, that the non-employee Director is, as of such vesting date, then a director of the Company.

(b) Annual Grants. Annual grants of 10,000 stock options (the “Annual Grants”) shall be made to non-employee Directors in addition to the Welcome Grants, which grants shall vest in equal monthly installments over one year, with the first tranche vesting on the one month anniversary of the date of the grant, provided, in all cases, that the non-employee Director is, as of each such vesting date, then a director of the Company.

(c) Exercise Period Upon Departure. If a recipient of option grants under this Policy (the “Optionee”) ceases to be a Director for any reason, any portion of the Optionee’s Welcome Grant or Annual Grants outstanding on such date may be exercised, to the extent exercisable on the date the Optionee ceased to be a Director, for a period of three (3) years from the date the Optionee ceased to be a Director or until the expiration date of the applicable option grants, if earlier. Any portion of the Welcome Grant or Annual Grants that is not exercisable on the date the Optionee ceases to be a Director shall terminate immediately and be of no further force or effect.

The foregoing compensation will be in addition to reimbursement of all out-of-pocket expenses incurred by non-employee Directors in attending meetings of the Board.

**List of Subsidiaries of the Company.**

- Ocera Subsidiary, Inc., a Delaware corporation

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in the following Registration Statements:

1. Registration Statement (Form S-3 No. 333-204214) of Ocera Therapeutics, Inc.,
2. Registration Statement (Form S-3 No. 333-192698) of Ocera Therapeutics, Inc.,
3. Registration Statement (Form S-8 No. 333-173535) pertaining to the 2001 Employee Stock Option Plan of Tranzyme, Inc., 2001 Non-Employee Stock Option Plan of Tranzyme, Inc., Amended and Restated 2003 Stock Option Plan of Tranzyme, Inc., Amended and Restated 2004 Stock Option Plan of Tranzyme Pharma, Inc., and the 2011 Stock Option and Incentive Plan of Tranzyme, Inc.,
4. Registration Statement (Form S-8 No. 333-182408) pertaining to the Amended and Restated 2011 Stock Option and Incentive Plan of Tranzyme, Inc.,
5. Registration Statement (Form S-8 No. 333-191644) pertaining to the Ocera Therapeutics, Inc. 2005 Stock Plan,
6. Registration Statement (Form S-8 No. 333-193094) pertaining to the Ocera Therapeutics, Inc. Second Amended and Restated 2011 Stock Option and Incentive Plan, and
7. Registration Statement (Form S-8 No. 333-205475) pertaining to the Ocera Therapeutics, Inc. Third Amended and Restated 2011 Stock Option and Incentive Plan,

of our reports dated March 11, 2016 , with respect to the consolidated financial statements of Ocera Therapeutics, Inc. and the effectiveness of internal control over financial reporting of Ocera Therapeutics, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2015.

/s/ Ernst & Young LLP

San Diego, California

March 11, 2016

**CERTIFICATION PURSUANT TO  
SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Linda S. Grais, M.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of Ocera Therapeutics, Inc. (the registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2016

By: /s/ Linda S. Grais, M.D.

Linda S. Grais, M.D.

President and Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION PURSUANT TO  
SECTION 302 OF  
THE SARBANES-OXLEY ACT OF 2002**

I, Michael Byrnes, certify that:

1. I have reviewed this Annual Report on Form 10-K of Ocera Therapeutics, Inc. (the registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2016

By: /s/ Michael Byrnes

Michael Byrnes

Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Ocera Therapeutics, Inc. (the "Company") on Form 10-K for the year ended December 31, 2015, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Linda S. Grais, M.D., President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 11, 2016

By: /s/ Linda S. Grais, M.D.

Linda S. Grais, M.D.

President and Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Ocera Therapeutics, Inc. (the "Company") on Form 10-K for the year ended December 31, 2015, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Michael Byrnes, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 11, 2016

By: /s/ Michael Byrnes

Michael Byrnes

Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)