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Raptor Pharmaceutical Corp

Form 424B5

July 03, 2013

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Registration No. 333-179215

Amendment No. 2 dated July 3, 2013 to Prospectus Supplement

dated April 30, 2012 (To prospectus dated February 3, 2012)

Shares of Common Stock, par value \$0.001 per share

This amendment No. 2 to prospectus supplement, or Amendment, amends and supplements the prospectus supplement dated April 30, 2012 (as previously amended) to the prospectus dated February 3, 2012, or Prospectus Supplement. This Amendment should be read in conjunction with the Prospectus Supplement and the prospectus dated February 3, 2012, each of which are to be delivered with this Amendment. This Amendment amends only those sections of the Prospectus Supplement listed in this Amendment; all other sections of the Prospectus Supplement remain as is.

We have amended and restated our sales agreement with Cowen and Company, LLC, or Cowen, relating to shares of our common stock, offered by this Amendment, the Prospectus Supplement and the prospectus accompanying the Prospectus Supplement, or Accompanying Prospectus. In accordance with the terms of the amended and restated sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$100,000,000. Since inception, we have sold approximately 6.3 million shares of our common stock under the sales agreement at a weighted average selling price of \$6.05 per share for net proceeds (after 3.0% commission to Cowen) of approximately \$37.2 million.

Our common stock is listed on The Nasdaq Global Market under the symbol "RPTP." The last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2013 was \$9.37 per share.

Cowen may sell our common stock by methods deemed to be an "at the market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, including sales made directly on The Nasdaq Global Market, on any other existing trading market for our common stock or to or through a market maker. In addition, with our prior written approval, Cowen may also sell our common stock by any other method permitted by law, including in privately negotiated transactions. Cowen will act as sales agent using its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Stock Market LLC.

We will pay Cowen a commission, or allow a discount, for its services in acting as agent in the sale of our common stock equal to 3.0% of the gross sales price per share of all shares sold through it as agent under the amended and restated sales agreement.

This investment involves a high degree of risk. See "Risk Factors" beginning on page A-8 of this Amendment and in our periodic reports filed with the Securities and Exchange Commission and incorporated by reference herein for a discussion of the material risks you should consider before making an investment in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Amendment, the Prospectus Supplement or the Accompanying Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Cowen and Company

The date of this Amendment is July 3, 2013.

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You should rely only on the information contained or incorporated by reference in this Amendment, the Prospectus Supplement, the Accompanying Prospectus and in any free writing prospectuses we may provide to you in connection with this offering. We have not, and Cowen has not, authorized any other person to provide you with any information that is different. If anyone provides you with different or inconsistent information, you should not rely on it. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this Amendment, the Prospectus Supplement or the Accompanying Prospectus and the offering of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this Amendment, the Prospectus Supplement or the Accompanying Prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common stock and the distribution of this Amendment, the Prospectus Supplement or the Accompanying Prospectus outside the United States. This Amendment, the Prospectus Supplement or the Accompanying Prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this Amendment, the Prospectus Supplement or the Accompanying Prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. The Accompanying Prospectus is not subject to completion.

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## PROSPECTUS SUMMARY

This summary highlights selected information concerning our business and this offering of shares of our common stock. It is not complete and does not contain all of the information that may be important to you and your investment decision. The following summary is qualified in its entirety by the more detailed information and consolidated financial statements and notes thereto included elsewhere or incorporated by reference into this Amendment, the Prospectus Supplement and the Accompanying Prospectus. You should carefully read this entire Amendment, the Prospectus Supplement and the Accompanying Prospectus, including the information incorporated by reference herein, and should consider, among other things, the matters set forth in "Risk Factors" before making an investment decision. References to the terms "Raptor", and "we," "us," "our" or similar terms, refer to Raptor Pharmaceutical Corp. and its wholly-owned subsidiaries on a consolidated basis, unless we state or the context implies otherwise.

### Overview

We are a biopharmaceutical company focused on developing and commercializing life-altering therapeutics that treat debilitating and often fatal diseases.

Our first product, PROCYSBI™ (cysteamine bitartrate) delayed-release capsules, or PROCYSBI, received marketing approval from the U.S. Food and Drug Administration, or FDA, on April 30, 2013 for the management of nephropathic cystinosis in adults and children six years and older. On June 19, 2013, we officially launched PROCYSBI in the U.S., and PROCYSBI became available for shipment to cystinosis patients. In conjunction with the launch of PROCYSBI, we initiated a dedicated call center, which serves as an integrated resource for PROCYSBI prescription intake, third-party payor reimbursement adjudication, patient financial support and ongoing outreach for managing treatment adherence and persistence. This call center, along with our specialty pharmacy and proactive physician and patient disease education initiatives, reflect our commitment to helping patients manage their disease. On June 25, 2013, the Office of Orphan Product Development at the FDA granted us orphan drug exclusivity for PROCYSBI (cysteamine bitartrate) delayed-release capsules for the management of nephropathic cystinosis in patients ages six and older. The exclusivity period began on the date of FDA approval, April 30, 2013, and lasts seven years, subject to certain exceptions.

On June 28, 2013, the European Committee for Medicinal Products for Human Use, or CHMP, issued a positive opinion recommending marketing authorization for PROCYSBI 25mg and 75mg gastro-resistant hard capsules (International Nonproprietary Name mercaptamine bitartrate) for the treatment of proven nephropathic cystinosis. The positive opinion from CHMP must be ratified by the European Commission in order to grant marketing authorization for PROCYSBI, which would cover all 27 EU member countries plus Iceland and Norway. A decision is expected from the European Commission within a few months of the CHMP recommendation.

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## PROCYSBI

PROCYSBI is a new therapy for the management of nephropathic cystinosis. PROCYSBI (formerly known as RP103) capsules contain cysteamine bitartrate formulated into innovative microspherized beads that are individually coated to create a delayed-release formulation with extended-release properties, allowing patients to maintain therapeutic systemic drug levels for a full 12-hour dosing period. The enteric coating makes PROCYSBI pH sensitive, which allows the microbeads to bypass the stomach for dissolution and absorption in the more alkaline environment of the proximal small intestine. Randomized controlled clinical trials and extended treatment with PROCYSBI therapy demonstrated consistent control of the levels of the biomarker (and surrogate marker), white blood cell cystine.

### About Nephropathic Cystinosis

Nephropathic cystinosis comprises 95% of cases of cystinosis, a rare, life-threatening metabolic lysosomal storage disorder that causes toxic accumulation of cystine in all cells, tissues, and organs in the body. Elevated cystine leads to progressive, irreversible tissue damage and multi-organ failure, including kidney failure, blindness, muscle wasting and premature death. Nephropathic cystinosis is usually diagnosed in infancy after children present with symptoms including markedly increased urination, thirst, dehydration, gastrointestinal distress, failure to thrive, rickets, photophobia and specific kidney symptoms called Fanconi syndrome. Management of cystinosis requires lifelong therapy. If left untreated, the disease is usually fatal by the end of the first decade of life. There are an estimated 500 patients living in the U.S. with cystinosis, and 2,000 worldwide.

Cystine depletion is the primary treatment strategy for nephropathic cystinosis. However, poor adherence to therapy has been a major challenge resulting in poor sustained control of cystine levels, and patients consequently experience poor clinical outcomes, including kidney insufficiency leading to dialysis and kidney transplantation, muscle wasting and in some cases, premature death. Even brief interruptions in daily therapy can permit toxic accumulation of cystine, exposing tissues to renewed, progressive deterioration.

### RP103 for Huntington's Disease

Huntington's disease, or HD, formerly called Huntington's chorea, is a rare, inherited neurodegenerative disorder. HD causes degeneration in cerebral cortex and basal ganglia, which play a key role in movement and behavior control.

The cumulative damage to these areas results in the hallmark symptoms of HD: chorea (jerky movements), neuropsychiatric symptoms, loss of executive functioning and dementia. HD is caused by an autosomal dominant mutation in either of an individual's two copies of a gene called Huntingtin, which means any child of an affected person typically has a 50% chance of inheriting the disease. The Huntingtin gene provides the genetic information for a protein that is also called "huntingtin." Expansion of a CAG triplet repeat stretch within the Huntingtin gene results in a different (mutant) form of the protein, which gradually damages cells in the brain.

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Two master genes, Huntingtin (Htt) and huntingtin-associated protein (Hap1), are involved in the control of brain-derived neurotrophic factor, or BDNF, axonal transport. HD patients are believed to be deficient in BDNF. The BDNF protein encoded by the Bdnf gene is a member of the nerve growth factor family. It is induced by cortical neurons, and is necessary for survival of striatal neurons in the brain. Expression of the Bdnf gene is reduced in both Alzheimer's and Huntington's disease patients. This Bdnf gene may play a role in the regulation of stress response and in the biology of mood disorders. HD manifests as a triad of movement, cognitive and psychiatric symptoms which progress gradually in severity over many years, eventually causing severe physical and mental disability and potentially early death. The symptoms of HD usually become evident between the ages 35-44 years, but the onset can also begin from childhood to late life (>75 years).

The treatment options for HD patients are very limited with no drugs that address the underlying pathophysiology. Drugs that are available provide symptomatic relief of chorea and mood swings associated with HD. In preclinical studies, cysteamine has shown the potential to slow the progression of HD by increasing the levels and intracellular transport of BDNF in mice and non-human primates.

In 2008, we received FDA orphan drug designation for cysteamine formulations, including RP103, for the potential treatment of HD. We plan to apply for orphan drug designation in the EU pending availability of clinical data. Centre Hospitalier Universitaire, or CHU, d'Angers, France, is currently conducting a Phase 2/3 clinical trial of RP103, our proprietary formulation of delayed-release cysteamine bitartrate, in 96 patients. This 36-month randomized trial is comprised of an 18-month placebo-controlled phase followed by an 18-month phase in which all patients transition to RP103. The trial commenced in October 2010, with full enrollment achieved in June 2012. The primary endpoint of the trial is change from the baseline of the Total Motor Score of the Unified Huntington's Disease Rating Scale, or UHDRS. Blood levels of BDNF are being measured as a secondary endpoint and potential biomarker. Under the collaboration agreement with CHU d'Angers, we supply RP103 and placebo capsules for the clinical trial and open-label extension study in exchange for regulatory and commercial rights to the clinical trial results. Clinical expenses of the study are covered by a grant from the French government. Interim results of this study following the first 18 months of treatment are expected to be announced in the first quarter of calendar 2014.

#### RP103 for Non-alcoholic Fatty Liver Disease in Children

Non-alcoholic fatty liver disease, or NAFLD, is the hepatic component of metabolic syndrome and is associated with deposition of triglycerides in the hepatocytes. NAFLD refers to a spectrum of conditions ranging from simple fat accumulation in the liver to steatohepatitis, cirrhosis, and hepatocellular carcinoma.

Non-alcoholic fatty liver (NAFL) – A benign condition with simple fat accumulation within liver cells (hepatic steatosis).

Non-alcoholic steatohepatitis (NASH) – An aggressive form of NAFLD characterized by hepatic steatosis and inflammation with hepatocyte injury (ballooning) with or without fibrosis.

Cirrhosis – Of patients with NASH, 15% to 25% progress to cirrhosis and its complications over 10 to 20 years.

Cirrhosis is characterized by the replacement of healthy liver tissue with fibrosis and scar tissue, leading to loss of liver function. NASH cirrhosis is a risk factor for development of hepatocellular carcinoma (HCC).

NAFLD is characterized histologically by hepatic steatosis and occurs in those who do not consume alcohol in amounts generally considered to be harmful to the liver. NAFLD is commonly associated with elements of metabolic syndrome, such as obesity, diabetes mellitus and hypertriglyceridemia. Additional factors include family history of diabetes and high blood lipids in people who are not obese.

NAFLD prevalence has been increasing along with the rise of obesity; as many as one-third of the U.S. population is believed to have NAFLD. NAFLD is now among the most common reasons why patients are referred for liver transplantation. The majority of the affected people in the early stage show no signs, symptoms or complications. However, patients in the advanced stage may experience fatigue, memory loss and fluid retention in the abdomen or legs.

According to the World Gastroenterology Organization Global Guidelines, the prevalence of NAFLD in children is about 15% in the U.S. and western countries. NAFLD is underdiagnosed in children due to lack of recognition, screening or appreciation of associated complications by healthcare providers. Children may not be recognized as obese during office visits and age-appropriate norms for body mass index may go unacknowledged. Liver disease is screened by measuring serum alanine aminotransferase, or ALT, and aspartate aminotransferase, or AST, starting at 10 years old in obese children and those with a body mass index of 85th to 94th percentile with other risk factors. Currently there are no drug treatment options for NAFLD. The disease is managed with lifestyle changes such as diet, exercise and weight reduction.

We believe cysteamine may exert a number of effects for the potential treatment of NAFLD. Cysteamine is a potent anti-oxidant, and dietary anti-oxidants, like vitamin E, have been clinically tested in NAFLD studies. In addition, cysteamine, through the formation of a cysteamine-cysteine disulfide complex, increases the production of the potent endogenous liver anti-oxidant glutathione, or GSH, and increasing GSH may have the potential to reverse NAFLD-related liver damage. GSH itself does not enter easily into cells, even when given in large doses. However, the cysteamine-cysteine complex easily enters cells through the lysine transporter and has been shown to be effective in treating certain conditions by preventing significant GSH depletion. Cysteamine has also been shown to inhibit tissue transglutaminase activity, which is elevated in NAFLD and may contribute to the formation of fibrotic tissue associated with advanced NAFLD.

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In 2011, Dr. Ranjan Dohil from the University of California San Diego, or UCSD, published the results of a Phase 2a clinical trial with a prototype of RP103 for the potential treatment of NASH. These results showed that patients receiving cysteamine exhibited a marked decline in ALT levels during the treatment period of 26 weeks, with 7 of 11 juvenile patients achieving a greater than 50% reduction and 6 of 11 reducing levels to within normal range. AST levels were also improved, with patients averaging 41% reduction by the end of the treatment phase. The reduction in liver enzymes was largely sustained during the 6 month post-treatment monitoring phase. Other important liver function markers showed positive trends. Levels of cytokeratin 18, a potential serum marker of disease activity in NASH and NAFLD, showed a positive decrease by an average of 45%. Adiponectin levels showed a positive increase by an average of 35% during the treatment period. Reduced adiponectin levels are thought to be a marker of the pathogenesis and progression of NASH and NAFLD.

The Phase 2a trial results were consistent with ALT and AST reductions seen in patients that achieve a 10% weight loss, although body mass index did not change significantly during both the treatment and post-treatment phases in the Phase 2a clinical trial. In this Phase 2a clinical trial, the prototype of RP103 demonstrated a favorable safety profile, with mean gastrointestinal symptom scores of 1.1 (the maximum score of 14 indicates the most severe gastrointestinal symptoms) at baseline and 0.7 after 6 months of treatment.

In June 2012, we announced the dosing of a first patient in a Phase 2b clinical trial evaluating the safety and efficacy of RP103 as a potential treatment of NAFLD in children. The clinical trial is being conducted pursuant to a Cooperative Research and Development Agreement, or CRADA, executed in December 2011 with the National Institute of Diabetes and Digestive and Kidney Diseases, or NIDDK, part of the National Institutes of Health. The trial, called Cysteamine Bitartrate Delayed-Release for the Treatment of Non-alcoholic Fatty Liver Disease in Children, or CyNCh, is expected to enroll a total of 160 pediatric participants at ten U.S. centers in the NIDDK-sponsored NAFLD Clinical Research Network. NIDDK and we share the costs of conducting the CyNCh clinical trial. The primary objective of this randomized, multicenter, double-blind, placebo-controlled Phase 2b clinical trial is to evaluate whether 52 weeks of treatment with RP103 in children reverses damage caused by NAFLD as measured by changes in NAFLD Activity Score, or NAS, a histological rating scale of disease activity, in conjunction with no worsening of liver fibrosis, as examined through liver biopsy. Secondary endpoints will include blood markers for liver health including ALT and AST as well as safety and tolerability. We anticipate full enrollment in the first half of 2014.

#### Other Clinical-Stage Product Candidate

##### Convivia™ for ALDH2 Deficiency

We are developing Convivia, our proprietary oral formulation of 4-methylpyrazole, or 4-MP, for the potential treatment of acetaldehyde toxicity resulting from ALDH2 deficiency.

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We own the intellectual property portfolio pertaining to Convivia, including method of use and formulation patents. In June 2010, we granted an exclusive license to commercialize Convivia in Taiwan to Uni Pharma Co., Ltd. Under this agreement, Uni Pharma is responsible for clinical development, registration and commercialization of Convivia in Taiwan. We continue to seek partners in other Asian countries to license Convivia.

#### Preclinical Product Candidates

Our preclinical programs, for which we are seeking development partners for these programs include our cysteamine dioxygenase, or ADO, program, to improve treatment of diseases for which cysteamine is therapeutic and our HepTide™ program to treat hepatocellular carcinoma and other cancers susceptible to induced lysosomal storage.

#### Other Development Areas

##### Securing Additional and Complementary Technology Licenses from Others

We plan to establish additional research collaborations with prominent universities and research labs and to secure licenses from these universities and labs for technology resulting from the collaborations. No assurances can be made regarding our ability to establish such collaborations over the next 12 months, or at all. We intend to focus our in-licensing and product candidate acquisition activities on identifying complementary therapeutics, therapeutic platforms that offer a number of therapeutic targets, and clinical-stage therapeutics based on existing approved drugs in order to create proprietary reformulations to improve safety and efficacy or to expand such drugs' clinical indications through additional clinical trials. We may obtain these products through collaborations, joint ventures or through merger and/or acquisitions with other biotechnology companies.

#### Future Activities

We expect that our near-term efforts will be focused on:

- Sales of PROCYSBI in the U.S.;
- Negotiating reimbursement country by country within the EU and launching PROCYSBI in those countries, if approved by the EMA;
- Conducting clinical trials that evaluate PROCYSBI in cystinosis patients that are cysteamine-naïve, as well as other supporting trials;
- Supporting our clinical trials of RP103 for the potential treatment of HD in adults and NAFLD in children; and
- Continuing the development of our novel preclinical programs.

THE OFFERING

Common stock offered by us	Shares having an aggregate gross offering price up to \$100,000,000. As of the date of this Amendment, we have offered and sold approximately 6.3 million shares of our common stock under the sales agreement for net proceeds of approximately \$37.2 million.
Manner of offering	"At-the-market" offering that may be made from time to time through our agent, Cowen and Company, LLC, or Cowen. See "Plan of Distribution."
Use of proceeds	We expect to use the net proceeds from the offering to fund our commercial and pre-commercial efforts, our clinical and preclinical development programs and other corporate purposes. See "Use of Proceeds" on page A-38 of this Amendment.
Dividend policy	We intend to retain all future earnings, if any, to fund the development and growth of our business. We do not anticipate paying cash dividends on our common stock.
Risk factors	This investment involves a high degree of risk. See "Risk Factors" on page A-8 of this Amendment and other information we include or incorporate by reference in the Prospectus Supplement and the Accompanying Prospectus.

**Nasdaq Global Market symbol RPTP**

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## RISK FACTORS

An investment in shares of our common stock involves a high degree of risk. Before you decide to invest in shares of our common stock, you should consider carefully all of the information in this Amendment, the Prospectus Supplement and the Accompanying Prospectus, including the risks and uncertainties described below, as well as other information included in or incorporated by reference into this Amendment, the Prospectus Supplement and the Accompanying Prospectus, particularly the specific risk factors discussed in the sections titled "Risk Factors" contained in our filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, before deciding whether to invest in shares of our common stock. Any of these risks could have a material adverse effect on our business, prospects, financial condition and results of operations. In any such case, the price of our common stock could decline and you could lose all or part of your investment.

### Risks Associated with Product Development and Commercialization

We currently depend entirely on the success of our lead drug, PROCYSBI. If PROCYSBI sales in the U.S. are not robust or if we do not obtain EU approval of PROCYSBI, our financial results and financial condition will be adversely affected.

On April 30, 2013, the FDA approved PROCYSBI (cysteamine bitartrate) delayed-release capsules for the management of nephropathic cystinosis in adults and children six years and older, and PROCYSBI capsules became commercially available in the U.S. for nephropathic cystinosis patients in June 2013. Continued sales of PROCYSBI will likely drive our value as reflected in the trading price of our common stock. However, we do not have prior experience in commercializing therapeutics. If PROCYSBI sales are not as robust as expected by analysts and investors, our value may not increase or could significantly decrease. The CHMP recently adopted a positive opinion recommending marketing authorization for PROCYSBI, which must be ratified by the European Commission for marketing approval in the EU, where we believe there is a significant number of cystinosis patients. We anticipate a decision from the European Commission during the second half of 2013, but if we do not obtain marketing approval in the EU, our business prospects will decline. The successful commercialization of PROCYSBI will depend on several factors, including:

- successful sales of PROCYSBI in the U.S., including, among other factors, identification of potential physician prescribers and potential patients for, and obtaining sales, of PROCYSBI;
- approval of PROCYSBI in the EU for the management of nephropathic cystinosis by the EMA;
- the successful launch of PROCYSBI in the EU and other selected territories throughout the economically developed world, if approved;
- effective communication distinguishing the safety and efficacy of PROCYSBI from competitive products or alternative therapeutic regimes;

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- acceptance of PROCYSBI by physicians, parents, patients and cystinosis research/advocacy organizations including the conversion from the existing standard of care to PROCYSBI;
- coverage and reimbursement for PROCYSBI from commercial health plans and government health programs, which we refer to collectively as third-party payors;
- compliance with regulatory requirements including fulfilling any FDA required post-approval commitments;
- provision of affordable out-of-pocket cost to patients and/or other programs to ensure patient access to PROCYSBI;
- approval by other country regulatory agencies of appropriate product labeling for PROCYSBI;
- execution and maintenance of agreements with wholesalers and distributors on commercially reasonable terms;
- manufacture and supply of adequate quantities of PROCYSBI to meet commercial demand;
- development and maintenance of intellectual property protection for PROCYSBI; and
- execution of robust commercial operations and medical affairs' activities in support of marketing and sales requirements.

If we fail to successfully commercialize PROCYSBI at sufficient sales levels or gain EU approval of PROCYSBI within a reasonable time period, we will be unable to sustain or grow our business and we may never become profitable, and our business, financial condition and results of operations will be adversely affected.

If we are unable to expand the use of RP103 and receive regulatory approval for any other indication, we may delay or cease some of our product development activities, which would adversely affect the longer term value of RP103 and our growth prospects.

We must obtain and maintain appropriate approvals from regulatory agencies in each of the markets in which we intend to market our products before we may market them. If we receive approvals for our products, we may only market our products for the specific uses that are reflected in the product's approved labeling. In the U.S., we are permitted to market RP103 for the management of nephropathic cystinosis in adults and children six years and older under the brand name PROCYSBI, and we may not market RP103 in the U.S. for any other indication. We do not have approval of RP103 in any other market and we are not permitted to market RP103 in these markets until we obtain necessary regulatory approvals. To market a new drug in the U.S., we must submit to the FDA and obtain FDA approval of a new drug application, or NDA, for each individual indication. To market a new drug in Europe, we must submit to the EMA or relevant regulatory authority in the designated Reference Member State and obtain approval of an MAA for each individual indication. An NDA or MAA must be supported by extensive clinical and preclinical data, as well as extensive information regarding chemistry, manufacturing and controls, to demonstrate the safety and efficacy of the applicable product candidate for the treatment of each individual indication.

We have additional product development programs in the clinical testing stage for the use of RP103 in HD and in NAFLD. These product development programs have not advanced to the stage of a submission for marketing approval to the FDA or EMA or to any other regulatory body in any other jurisdiction.

Obtaining approval of an NDA or MAA or any other filing for approval in a foreign country is an extensive, lengthy, expensive and uncertain process. The FDA, EMA or other regulatory authorities may reject a filing or delay, limit or deny approval of RP103 for many reasons, including:

- the results of clinical trials may not meet the level of statistical significance or clinical significance required by the FDA, EMA and/or other regulatory authorities for approval;
- the FDA, EMA or other regulatory authorities may disagree with the number, design, size, conduct or implementation of our clinical trials; may not find the data from preclinical studies and clinical trials sufficient to demonstrate that RP103 has adequate clinical and other benefits and an adequate safety profile; or may disagree with our interpretation of data from preclinical studies or clinical trials and require that we conduct one or more additional trials;
- the FDA, EMA or other regulatory authorities may not accept data generated at our clinical trial sites;
- the FDA, EMA or other regulatory authorities may have difficulties scheduling an advisory committee meeting (if required) in a timely manner or the advisory committee may recommend against approval of our application or may recommend that the regulatory agency require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the FDA, EMA or other regulatory authorities may require additional preclinical or clinical studies or other data prior to granting approval, and we may not be able to generate the required data on a timely basis, if at all;
- the FDA, EMA or other regulatory authorities may impose limitations on approved labeling of RP103, thus introducing reimbursement complications which may limit access for intended uses;
- the FDA, EMA or other regulatory authorities may identify deficiencies in the manufacturing processes or in the facilities of our third party contract manufacturers, or may require us to manufacture additional validation batches or change our process or specifications;
- we may not be able to validate our manufacturing process to the satisfaction of the FDA, EMA or other regulatory authorities, or they may not agree with our plan for concurrent validation; or
- the FDA, EMA or other regulatory authorities may change approval policies or adopt new regulations.

Despite regulatory guidelines, we cannot reliably predict if or when any of the drug product candidates we are developing or intend to develop will be approved for marketing. If we fail to gain regulatory approval for RP103 for other indications, our financial results and financial condition will be adversely affected. In such a case, we will have to delay or terminate some or all of our research product development programs and may be forced to dramatically restructure or cease operations.

PROCYSBI and our other future product candidates will be subject to labeling and other restrictions or potential market withdrawal, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

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Any regulatory approvals that we obtain for PROCYSBI or our product candidates will also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval. The FDA strictly regulates the promotional claims that may be made about prescription products and our product labeling, advertising and promotion is subject to regulatory requirements and continuing regulatory review. Physicians may nevertheless prescribe our product to their patients in a manner that is inconsistent with the approved label, or off-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.

In addition, if the FDA, EMA or other regulatory authorities approve a product candidate, the manufacturing processes, labeling, packaging, distribution, storage, adverse event reporting, dispensation, distribution, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements will include submissions of safety and other post-marketing information and reports, ongoing maintenance of product registration, as well as continued compliance with cGMPs (good manufacturing practices), GCPs (good clinical practices), and GLPs (good laboratory practices). If we do not comply with the applicable regulations and requirements, the range of possible sanctions includes issuance of adverse publicity, product recalls or seizures, fines, total or partial suspensions of production and/or distribution, suspension of marketing applications and enforcement actions, including injunctions and civil or criminal prosecution. The FDA, EMA and other international regulatory agencies can withdraw a product's approval, including PROCYSBI's approval, under some circumstances, such as the failure to comply with regulatory requirements or unexpected safety issues.

If serious adverse side effects are associated with PROCYSBI, our business could be harmed.

The FDA-approved prescribing information for PROCYSBI for the management of nephropathic cystinosis in adults and children ages six and over includes several warnings relating to observed adverse reactions. With commercial use and additional clinical trials, we expect to continue to update adverse reactions listed in the prescribing information. If additional adverse reactions emerge, or a pattern of severe or persistent previously observed side effects is observed in the relevant patient populations, the FDA or other regulatory agencies could modify or revoke our marketing approval or we may choose to withdraw PROCYSBI from the market. If this were to occur, we may be unable to obtain marketing approval in additional indications. In addition, if patients receiving PROCYSBI were to suffer harm as a result of their use of the product, these patients or their representatives may bring claims against us. These claims, or the mere threat of these claims, could have a material adverse effect on our business and results of operations.

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Pressure on drug product third-party coverage and reimbursement/pricing may impair our ability to be reimbursed for PROCYSBI and our other future product candidates at prices or on terms sufficient to provide a viable financial outcome.

Market acceptance and sales of PROCYSBI and any product candidates that we may develop will depend in large part on global reimbursement policies and may be affected by future healthcare reform measures in the U.S. as well as the EU and other key international markets. The continuing efforts of governmental and third-party payors to contain, reduce or shift the costs of healthcare through various means, including an increased emphasis on managed care and attempts to limit or regulate the price of medical products and services, particularly for new and innovative products and therapies, may result in downward pressure on product pricing, reimbursement and usage, which may adversely affect our product sales and results of operations. These pressures can arise from rules and practices of managed care groups, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, drug coverage and reimbursement policies and pricing in general. Successful commercialization of our products will depend in part on the availability of governmental and third-party private payor reimbursement for the therapeutic value of our products.

For example, in many foreign markets, the pricing or profitability of healthcare products is subject to government control. In many European countries, patients are unlikely to use prescription drugs that are not reimbursed by their governments. In the U.S., there has been, and we expect there will continue to be, a number of federal and state proposals to implement similar government price control. The implementation or even the announcement of any of these legislative or regulatory proposals or reforms could harm our business, by reducing the prices we are able to charge for our products, reducing the reimbursement rates for our products and increasing governmental rebates, impeding our ability to achieve profitability, raise capital or form collaborations. In particular, in the U.S., private health insurers and other third-party payors often follow the coverage and reimbursement policies of government payors, including the Medicare or Medicaid programs. We will not know whether third-party payors will cover and reimburse for PROCYSBI and our other product candidates until we enter into payor negotiations. If we are unable to obtain sufficiently high reimbursement rates for our products, they will not be commercially viable.

Even with U.S. approval of PROCYSBI, our ability to generate revenues from PROCYSBI will be subject to attaining significant market acceptance among physicians, patients, patient families, healthcare payors and the healthcare community.

PROCYSBI may not attain market acceptance among physicians, patients, patient families, healthcare payors or the healthcare community compared to the current standard of care. We believe that the degree of market acceptance and our ability to generate revenues from PROCYSBI will depend on a number of factors, including:

- availability and relative efficacy and safety of therapeutic alternatives;
- the price of our products, both in absolute terms and relative to alternative treatments;
- timing of market introduction of our products as well as competitive drugs;

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- efficacy and safety and real-world patient and physician experience with PROCYSBI;
- identification of currently diagnosed and undiagnosed patients and continued projected growth of the cystinosis market;
- prevalence and severity of any side effects;
- acceptance by patients, patient families, primary care specialists and key specialists including conversion from the existing standard of care;
- potential or perceived advantages or disadvantages of our products compared to alternative treatments, including safety, efficacy, cost of treatment and relative convenience and ease of administration;
- strength of sales, marketing, market access, medical affairs and distribution support;
- the effect of current and future healthcare laws;
- availability of coverage and adequate reimbursement and pricing from government and other third-party payors; and
- breadth of product labeling or product insert requirements of the FDA, EMA or other regulatory authorities.

If PROCYSBI does not receive significant market acceptance among physicians, patients, patient families, healthcare payors or the healthcare community, our ability to generate revenues from PROCYSBI will be severely affected.

Because the target patient populations for some of our drug product candidates, including PROCYSBI, are small, we must achieve significant market share and obtain relatively high per-patient prices for our products to achieve meaningful gross margins.

PROCYSBI and our clinical development of RP103 target diseases with small patient populations, including cystinosis and HD, respectively. A key component of the successful commercialization of a drug product for these indications includes identification of patients and a targeted prescriber base for the drug product. Due to small patient populations, we believe that we would need to have significant market penetration to achieve meaningful revenues and identifying patients and targeting the prescriber base are key to achieving significant market penetration. In addition, the per-patient prices at which we sell PROCYSBI (currently an estimated average of \$250,000 per year in the U.S.) and RP103 for these indications will need to be relatively high in order for us to generate an appropriate return for the investment in these product development programs and achieve meaningful gross margins. There can be no assurance that we will be successful in achieving a sufficient degree of market penetration and/or obtaining or maintain high per-patient prices for PROCYSBI and RP103 for diseases with small patient populations.

If we fail to obtain or maintain orphan drug exclusivity or regulatory exclusivity for some of our drug product candidates, our competitors may sell products to treat the same conditions and our revenues will be reduced.

As part of our business strategy, in addition to PROCYSBI, we intend to develop other drugs that may be eligible for FDA and EMA orphan drug designation. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, defined as a patient population of less than 200,000 in the U.S. The company that

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first obtains FDA approval for a designated orphan drug for a given rare disease receives marketing exclusivity for use of that drug for the stated condition for a period of seven years (with an additional half year if for a pediatric indication). Orphan drug exclusive marketing rights 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. Similar regulations are available from the EMA with a 10-year period of market exclusivity.

Because the extent and scope of patent protection for some of our drug products may be particularly limited, orphan drug designation is especially important for our products that are eligible for orphan drug designation. For eligible drugs, we plan to rely on the exclusivity period under Orphan Drug Act designation to maintain a competitive position. Although we received orphan drug exclusivity in the U.S. and anticipate receiving it in the EU upon drug approval for PROCYSBI, if we do not obtain orphan drug exclusivity for PROCYSBI or RP103 under the Hatch-Waxman Act, PROCYSBI or RP103 are eligible for a 3-year regulatory exclusivity period as a reformulated version of a previously approved drug substance for which clinical studies that are essential for approval have been conducted in addition to the half year pediatric exclusivity, as applicable. However, if we do not obtain orphan drug exclusivity for RP103 or our future relevant drug products that do not have strong patent protection, our competitors may then sell the same drug to treat the same condition and our revenues will be reduced.

Even though we have been granted orphan drug designation prior to the approval of PROCYSBI for the potential treatment of cystinosis and RP103 for the potential treatment of HD, and even if we obtain orphan drug designation for our future drug product candidates, we may not fulfill the criteria for exclusivity or we may not be the first to obtain marketing approval for any orphan indication. Further, even if we obtain orphan drug exclusivity for a particular product, that exclusivity may not effectively protect the product from competition because different drugs can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is safer, more effective or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug, nor gives the drug any advantage in the regulatory review or approval process.

A breakthrough designation for our drug product candidates, if obtained, may not actually lead to a faster review process.

In the future, we may request breakthrough designation or fast-track designation from the FDA for RP103 for HD and our other drug product candidates; however, the FDA may not grant it. Without one of these designations, the FDA review timeline could be at least 10 to 12 months. Under the FDA policies, a drug candidate is eligible for breakthrough designation or fast-track designation from the time a complete NDA is accepted for filing, if the drug candidate provides a significant improvement compared to marketed drugs in the treatment, diagnosis or prevention of a rare disease. A lengthier review process will delay revenue from the sale of products and will increase the capital necessary to fund these product development programs. Obtaining breakthrough designation or fast-track designation from the FDA does not guarantee FDA approval of our NDA or that the FDA will not request additional information, including requesting additional clinical studies (although potentially post-marketing), during its review. Any request for additional information or clinical data could delay the FDA's timely review of our NDA.

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Even though we have obtained U.S. regulatory approval for PROCYSBI, we will be subject to ongoing regulatory obligations, oversight and continued regulatory review, which may result in significant additional expense.

Although we received U.S. marketing approval for PROCYSBI, approval of PROCYSBI in the EU could contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and extraordinary requirements for surveillance to monitor the safety and efficacy of the drug product. Post-marketing studies and/or post-market surveillance may suggest that a product causes undesirable side effects which present an increased risk to the patient. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or identify data that suggest that one of our approved products may present a risk to safety, the regulatory authorities could withdraw our product approval, suspend production or place other marketing restrictions on our products. If regulatory sanctions are applied or if regulatory approval is delayed or withdrawn, our growth prospects and our operating results will be adversely affected.

We may not be successful in integrating our European operations with our U.S. operations.

In connection with the potential European commercial launch of PROCYSBI, if approved in the EU, we have expanded our operations in Europe where we have added and expect to continue to add personnel. We may encounter difficulties successfully managing a substantially larger and internationally diverse organization and may encounter delays in drug development and commercialization if we are not successful in integrating our international operations. Challenges related to managing international operations include the following:

- the potential strain on our financial and managerial controls and reporting systems and procedures;
- potential miscommunication between U.S. personnel and European personnel due to cultural and language differences;
- ability to operate within diverse individual country regulatory and statutory laws; and
- greater than anticipated costs of maintaining EU presence, in-country legal entities and related tax structures.

If we fail to obtain and maintain approval from regulatory authorities in international markets for PROCYSBI, RP103 and any future product candidates for which we have rights in international markets, our market opportunities will be limited and our business will be adversely impacted.

Sales of PROCYSBI, RP103 and our other product candidates outside of the U.S. will be subject to foreign regulatory requirements governing clinical trials, manufacturing and marketing approvals. Even if the FDA grants marketing approval for a product candidate, comparable regulatory authorities of foreign countries, including the EMA, must also approve the manufacturing and marketing of our product candidates in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods

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different from, and greater than, those in the U.S., including additional preclinical studies or clinical trials or manufacturing and control requirements. In many countries outside the U.S., a product candidate must be approved for reimbursement before it can be approved for sale in that country. In many cases, the price that we propose to charge for our products is also subject to approval by individual countries before we can launch our product candidates in those countries. Obtaining foreign regulatory approvals, complying with foreign regulatory requirements and gaining approved pricing and reimbursement could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. Further, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries and regulatory approval in one country does not ensure approval in any other country, while a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others.

If we fail to demonstrate safety or efficacy in our preclinical studies or clinical trials or keep to the terms of a product development program, our future business prospects for these drug product candidates will be materially adversely affected.

The success of our development and commercialization efforts will be greatly dependent upon our ability to demonstrate drug product candidate safety and efficacy in preclinical studies and clinical trials. Preclinical studies involve testing drug product candidates in appropriate multiple non-human disease models to demonstrate efficacy and safety. Regulatory agencies evaluate these data carefully before they will approve clinical testing in humans. If certain preclinical data reveals potential safety issues or the results are inconsistent with an expectation of the drug product candidate's efficacy in humans, the regulatory agencies may require additional more rigorous testing before allowing human clinical trials. This additional testing will increase program expenses and extend timelines. We may decide to suspend further testing on our drug product candidates or technologies if, in the judgment of our management and advisors, the preclinical test results do not support further development.

Following successful preclinical testing, drug product candidates will need to be tested in a clinical development program to provide data on safety and efficacy prior to becoming eligible for product approval and licensure by regulatory agencies. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful. The clinical trial process may fail to demonstrate with statistical significance that our drug product candidates are safe for humans and effective for indicated uses. This failure would cause us to abandon a drug product candidate and may delay development of other drug product candidates. Any delay in, or termination of, our preclinical testing or clinical trials will delay the filing of our investigational new drug application, or IND, and NDA as applicable, with the FDA, EMA or other regulatory agencies and, ultimately, our ability to commercialize our drug product candidates and generate product revenues. In addition, some of our clinical trials will involve small patient populations. Because of the small sample size, the results of these early clinical trials may not be indicative of future results. The failure to demonstrate safety or efficacy in our clinical trials would have a material adverse effect on our future business prospects, financial condition and operating results.

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The use of any of our drug product candidates in clinical trials or the commercialization of PROCYSBI may expose us to liability claims.

The nature of our business exposes us to potential liability risks inherent in the testing (including through human trials), manufacturing and marketing of PROCYSBI and our drug product candidates. PROCYSBI and our drug product candidates could potentially harm people or allegedly harm people and we may be subject to costly and damaging product liability claims. Many of the patients who participate in our current clinical trials and U.S. cystinosis patients who may purchase PROCYSBI commercially are already critically ill or suffering from chronic debilitating diseases. The waivers we obtain may not be enforceable and may not protect us from liability or the costs of product liability litigation. Although we currently carry product liability insurance, it may not be sufficient to cover future claims.

We may not be able to avoid significant liability if any product liability claim is brought against us. If a successful product liability claim is brought against us and the amount of liability exceeds our insurance coverage, we may incur substantial charges that would adversely affect our business, financial condition and results of operation.

We have no internal manufacturing experience and expect to continue to rely on a single third-party manufacturer to produce drug products that adequately support our commercial sales of PROCYSBI, our clinical trials of RP103 and potential commercial sales of RP103 if approved for other indications. If we fail to adequately supply commercial PROCYSBI to patients or RP103 for patients in clinical trials, our reputation would be harmed, our revenues could be delayed and our financial results could be adversely affected.

We do not currently manufacture PROCYSBI and RP103. We rely on a single manufacturer of the delayed release capsules as finished products of PROCYSBI and RP103. The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling up initial production to commercial requirements. These problems include difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Our third-party manufacturer and key suppliers may experience manufacturing difficulties due to sourcing scarcities or resource constraints or equipment problems or as a result of labor disputes, severe weather events, unstable political environments at foreign facilities or financial difficulties. If this manufacturer or key suppliers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, our ability to successfully launch PROCYSBI, or develop or launch any other product candidate based on RP103 would be jeopardized.

In addition, we rely on one exclusive supplier for the active pharmaceutical ingredient, or API, for PROCYSBI and RP103. While we work closely with this supplier, along with our exclusive finished goods supplier, to ensure continuity of supply while maintaining high quality and reliability, we cannot guarantee that these efforts will be successful. A reduction or interruption in our supply of API from this supplier and finished goods from our contract

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manufacturer, and efforts to identify and qualify alternative sources of API supply, could result in significant additional operating costs and delays in sales of PROCYSBI and in developing RP103 for HD and NAFLD. In addition, supply arrangements from alternative sources may not be available on acceptable economic terms, if at all.

Our manufacturers and suppliers are subject to the FDA's current cGMP requirements and other FDA requirements, Drug Enforcement Administration's regulations and other rules and regulations prescribed by non-U.S. regulatory authorities. We depend on our third party suppliers and manufacturers for compliance with these requirements, and they may not be able to do so. If we or our third party suppliers and manufacturers 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 to applications filed by us; suspend or impose restrictions on operations; including costly new manufacturing requirements; seize or detain products; or request that we initiate a product recall. The occurrence of any of these regulatory actions or penalties may inhibit our ability to commercialize our product and generate revenue.

We rely on third parties for the distribution and pharmaceutical services of PROCYSBI in the U.S. If these third parties fail to perform under our agreements with them, it may harm our reputation and may result in reduced revenues which may harm our financial condition.

We rely on a third party logistics provider and specialty pharmacy to distribute PROCYSBI to patients and to collect from insurance companies and government agencies in the U.S. Our ability to collect from the logistics provider is not only subject to such provider's credit worthiness but is also dependent, in part, on its ability to arrange for full reimbursement from third party payors. The outsourcing of our distribution function is complex, and we may experience difficulties that could reduce, delay or stop shipments of PROCYSBI. If we encounter such distribution problems, and we are unable to quickly enter into a similar agreement with another specialty distributor on substantially similar terms, if at all, the distribution of PROCYSBI could become disrupted, resulting in reduced revenues, healthcare provider dissatisfaction and/or patient dissatisfaction which may harm our reputation and financial condition.

Our reliance on third parties may result in delays in completing, or a failure to complete, preclinical testing, clinical trials or regulatory marketing submissions if they fail to perform under our agreements with them.

In the course of product development, we may engage or collaborate with a variety of external organizations to perform services essential to drug product development. The organizations which perform services can include, but are not limited to:

- governmental agencies, U.S. and international university laboratories;
- other biotechnology companies;
- contract manufacturing organizations;
- clinical research organizations;

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- distribution and supply (logistics) service organizations;
- testing organizations;
- consultants or consulting organizations with specialized knowledge based expertise;
- intellectual property legal firms; and
- multiple other service organizations.

If we engage these organizations to help us with our product development programs, many important aspects of this process have been and will be out of our direct control. If any of these organizations we engage in the future fail to perform their obligations under our agreements with them or fail to perform in a satisfactory manner, we may face delays in completing our development and commercialization processes for any of our drug product candidates. Furthermore, any loss or delay in obtaining contracts with such entities may also delay the completion of our clinical trials, regulatory filings and the potential market approval of our drug product candidates.

Specifically, we have and will continue to rely on third parties, such as contract research organizations and/or co-operative groups, to assist us in overseeing and monitoring clinical trials as well as to process the clinical results. If third parties fail to perform or to meet the applicable standards, this will result in delays in or failures to complete trials. A failure by us or such third parties to keep to the terms of a product development program for any particular product candidate or to complete the clinical trials for a product candidate in the anticipated time frame could have significant negative repercussions on our business and financial condition.

Our dependence on collaborative arrangements with other independent parties will subject us to a number of risks that could harm our ability to develop and commercialize products:

- collaborative arrangements might not be available on terms which are reasonably favorable to us, or at all;
- disagreements with partners may result in delays in the development and marketing of products, termination of collaboration agreements or time consuming and expensive legal action;
- agreement terms may be difficult or costly to enforce;
- we cannot control the amount and timing of resources partners devote to product candidates or their prioritization of product candidates, and partners may not allocate sufficient funds or resources to the development, promotion or marketing of our product candidates, or may not perform their obligations as expected;
- partners may choose to develop, independently or with other companies, alternative products or treatments, including products or treatments which compete with ours;
- agreements with partners may expire or be terminated without renewal, or partners may breach collaboration agreements with us;
- business combinations or significant changes in a partner's business strategy might adversely affect that partner's willingness or ability to complete its obligation to us; and
- the terms and conditions of the relevant agreements may no longer be suitable.

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We cannot guarantee that we will be able to negotiate acceptable future collaboration agreements or that those currently in existence will make it possible for us to fulfill our objectives.

If we do not obtain the support of new, and maintain the support of existing, key scientific and medical collaborators, it may be difficult to develop PROCYSBI, RP103 and new products and establish those products as a standard of care for various indications.

We will need to establish relationships with additional key opinion leaders, leading scientists and research institutions. We believe that such relationships are pivotal to establishing products using our technologies as a standard of care for their approved indications. Although we have various medical and scientific advisors and research collaborations, there is no assurance that our advisors and our research collaborators will continue to work with us or that we will be able to attract additional research partners. If we are not able to maintain existing or establish new clinical and scientific relationships to assist in our commercialization and research and development, we may not be able to successfully develop PROCYSBI, RP103 or our other drug product candidates.

Government health care reform could increase our costs, which could adversely affect our financial condition and results of operations.

Our industry is highly regulated and changes in law may adversely impact our business, operations or financial results. The Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, or the PPACA, is a sweeping measure intended to expand healthcare coverage within the U.S., primarily through the imposition of health insurance mandates on employers and individuals and expansion of the Medicaid program.

Several provisions of the new law, which have varying effective dates, may affect us, including our costs. For example, the PPACA increased the Medicaid rebate rate, revised the definition of "average manufacturer price" for reporting purposes, which could further increase the amount of the Medicaid drug rebates paid to states, and extended the rebate program to beneficiaries enrolled in Medicaid managed care organizations. The PPACA also expanded the 340B drug discount program (excluding orphan drugs), including the creation of new penalties for non-compliance and included a 50% discount on brand name drugs for Medicare Part D participants in the coverage gap, or "donut hole." The law also established an annual non-deductible fee on entities that sell branded prescription drugs or biologics to specified government programs in the U.S. The PPACA includes a provision to increase the Medicaid rebate for line extensions or reformulated drugs (NDA Type 3) based on the originator's initial price and subsequent price increases. Depending on the final regulations this could substantially increase our Medicaid rebate rate (in effect limiting reimbursement for these patients) if we participate in the Medicaid Drug Rebate Program. Substantial new provisions affecting compliance also have been added, which may require us to modify our business practices with healthcare practitioners.

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In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. In August 2011, the President signed into law the Budget Control Act of 2011, which created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which delayed for another two months the budget cuts mandated by these sequestration provisions of the Budget Control Act of 2011. On March 1, 2013, the President signed an executive order implementing sequestration, and on April 1, 2013, the 2% Medicare payment reductions went into effect. The ATRA also, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The full impact on our business of PPACA and the Budget Control Act is uncertain. We cannot predict whether other legislative changes will be adopted, if any, or how such changes would affect the pharmaceutical industry generally and specifically the commercialization of PROCYSBI.

We are or may be subject to various healthcare regulations, and if we fail to comply with such regulations, we could face substantial penalties.

The laws that may affect our ability to operate as a commercial organization include:

- the federal healthcare programs' Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs;
- federal false claims laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;
- federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- the federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information;
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers; and
- U.S. and European reporting requirements detailing interactions with and payments to healthcare providers.

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If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment, any of which could adversely affect our ability to market PROCYSBI, RP103 and other future drug candidates and adversely impact our financial results. The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Further, the recently enacted PPACA, among other things, amends the intent requirement of the federal anti-kickback and criminal health care fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the false claims statutes.

Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

The PPACA also imposes new reporting and disclosure requirements on drug manufacturers for any "transfer of value" made or distributed to prescribers and other healthcare providers. In addition, drug manufacturers will also be required to report and disclose any investment interests held by physicians and their immediate family members during the preceding calendar year. Failure to submit required information may result in civil monetary penalties of up to an aggregate of \$150,000 per year (and up to an aggregate of \$1 million per year for "knowing failures"), for all payments, transfers of value or ownership or investment interests not reported in an annual submission. Manufacturers will be required to begin data collection on August 1, 2013 and report such data to the government by March 31, 2014 and by the 90<sup>th</sup> calendar day of each year thereafter.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians for marketing. Some states, such as California, Massachusetts and Vermont, mandate implementation of compliance programs and/or the tracking and reporting of gifts, compensation, and other remuneration to physicians. The shifting compliance environment and the need to build and maintain robust and expandable systems to comply with multiple jurisdictions with different compliance and/or reporting requirements increases the possibility that a healthcare company may run afoul of one or more of the requirements.

We will continue to incur increased costs as a result of corporate governance and financial reporting laws and regulations and our management will continue to be required to devote substantial time to comply with such laws and regulations.

We face burdens relating to the recent trend toward stricter corporate governance and financial reporting standards. Legislation or regulations such as the Sunshine Act, Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as other rules implemented by the FDA, the SEC and Nasdaq, follow the trend of imposing stricter corporate governance and financial reporting standards and have led to an increase in the costs of compliance, including substantial increases

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in consulting, auditing and legal fees. New rules could make it more difficult or more costly for us to obtain certain types of insurance, including directors' and officers' liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. Failure to comply with these new laws and regulations may impact market perception of our financial condition and could materially harm our business. Additionally, it is unclear what additional laws or regulations may develop, and we cannot predict the ultimate impact of any future changes in law. Our management and other personnel will need to devote a substantial amount of time to these requirements.

In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our compliance with Section 404 will require that we incur substantial accounting and related expense and expend significant management efforts. In the future, we may need to hire additional accounting and financial staff to satisfy the ongoing requirements of Section 404. Moreover, if we are not able to comply with the requirements of Section 404, or we or our independent registered public accounting firm identifies deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

Our success depends on our ability to manage our projected growth.

Continued commercial sales of PROCYSBI in the U.S., the potential EU commercial launch of PROCYSBI (if approved in the EU), the continuation of our clinical-stage programs and our current plans to in-license and acquire additional clinical-stage product candidates will require us to retain existing and add required new qualified and experienced personnel in the commercial, regulatory, manufacturing, quality, program management, clinical and medical areas over the next several years. Also, as our preclinical pipeline diversifies through internal discoveries, or the acquisition or in-licensing of new molecules, we will need to hire additional scientists to supplement our existing scientific expertise over the next several years.

Our staff, financial resources, systems, procedures or controls may be inadequate to support our expanding operations and our management may be unable to take advantage of future market opportunities or manage successfully our relationships with third parties if we are unable to adequately manage our anticipated growth and the integration of new personnel.

Our loan agreement with HealthCare Royalty Partners contains a number of restrictive covenants and other provisions, which, if violated, could result in the acceleration of our outstanding indebtedness, which could have an adverse impact on our business and financial condition.

In December 2012, we entered into a loan agreement with HealthCare Royalty Partners, or HC Royalty, as lender, under which we agreed to borrow \$50.0 million in two \$25.0 million tranches, or the HC Royalty loan agreement. We drew down the first tranche in the amount of \$25.0 million in December 2012 upon signing the HC Royalty loan agreement and we drew down the second tranche of \$25.0 million in May 2013 as a result of our achievement of the milestone of U.S. approval of PROCYSBI. The HC Royalty loan agreement includes a variety of affirmative and negative covenants, including the use of commercially reasonable efforts to exploit PROCYSBI and RP103 in specific markets and compliance with laws, as well as restrictions on mergers and sales of assets, incurrence of liens, incurrence of indebtedness and transactions with affiliates and other requirements. To secure the performance of our obligations under the HC Royalty loan agreement, we granted a security interest to HC Royalty in substantially all of our assets, the assets of our subsidiaries and a pledge of stock of certain of our subsidiaries. Our failure to comply with the terms of the HC Royalty loan agreement and related documents, the occurrence of a change of control of our Company or the occurrence of an uncured material adverse effect on our Company, or our wholly-owned subsidiary Raptor Pharmaceuticals, or the occurrence of certain other specified events, could result in an event of default under the HC Royalty loan agreement that, if not cured or waived, could result in the acceleration of the payment of all of our indebtedness to HC Royalty and interest thereon. Under the terms of the security agreement, in an event of default, the lender could potentially take possession of, foreclose on, sell, assign or grant a license to use, our pledged collateral and assign and transfer the pledged stock of certain of our subsidiaries.

Credit risks from customers outside the U.S. may negatively affect our results of operations.

Any future sales of PROCYSBI or our potential products to government supported customers in various countries outside of the U.S. may be subject to significant payment delays due to government funding and reimbursement practices, which will result in an increase in the length of time that we may have accounts receivable outstanding. For example, many governments in Europe are facing significant liquidity crises. If government reimbursement for future sales of PROCYSBI, if approved in the EU, or our potential products is delayed or becomes unavailable, we may not be able to collect on amounts payable to us in reasonable time frames from such customers and our capital requirements will increase and our results of operations would be adversely affected.

Our business could be adversely affected by macroeconomic conditions.

Various macroeconomic factors could adversely affect our business and the results of our operations and financial condition, including changes in inflation, interest rates, foreign currency exchange rates and overall economic conditions and uncertainties, including those resulting from the current and future conditions in the global financial markets and business and economic conditions. For instance, if inflation or other factors were to significantly increase our business costs, it may not be feasible to increase the price of PROCYSBI or other future products due to the process by which healthcare providers are reimbursed.

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The U.S. credit and capital markets have recently experienced historic dislocations and a massive liquidity crisis which have caused financing to be unavailable in many cases and, even if available, have caused the cost of prospective financings to significantly increase. These circumstances have materially impacted liquidity in the debt and capital markets, making financing terms for borrowers or for companies seeking equity capital, for those companies that are able to find financing at all, less attractive. In many cases, financial conditions have resulted in the reduced availability or the unavailability of certain types of debt or equity financing. Continued uncertainty in the debt and equity markets may negatively impact our ability to access financing on favorable terms or at all. Federal legislation to deal with the current disruptions in the financial markets could have an adverse effect on our ability to raise other types of financing. In addition, our suppliers, manufacturers and other third parties important to our business also may be negatively impacted by market dislocations and disruptions, their business may be disrupted and this could adversely affect our business and results of operations.

Any product revenues could be reduced by imports from countries where our product candidates are available at lower prices.

Even though we have FDA approval of PROCYSBI, our sales in the U.S. may be reduced if PROCYSBI is imported into the U.S. from lower priced markets, whether legally or illegally. In the U.S., prices for pharmaceuticals are generally higher than in the bordering nations of Canada and Mexico. There have been proposals to legalize the import of pharmaceuticals from outside the U.S. If such legislation were enacted, our potential future revenues could be reduced.

Our future international sales and operating expenses will be subject to fluctuations in currency exchange rates.

If PROCYSBI is approved by the EMA and other regulatory authorities outside the U.S. and we sell PROCYSBI in such jurisdictions, a portion of our business will be conducted in currencies other than our reporting currency, the U.S. dollar. We will recognize foreign currency gains or losses arising from our operations in the period in which we incur those gains or losses. As a result, currency fluctuations between the U.S. dollar and the currencies in which we do business will likely cause foreign currency translation gains and losses in the future. Because of the number of currencies that may be involved, the variability of currency exposures and the potential volatility of currency exchange rates, we may suffer significant foreign currency translation and transaction losses in the future due to the effect of exchange rate fluctuations.

Our future success depends, in part, on the continued services of our management team.

Our success is dependent in part upon the availability of our senior executive officers, including Christopher M. Starr, Ph.D., Chief Executive Officer; Julie Anne Smith, Chief Operating Officer; Georgia Erbez, Chief Financial Officer; Ted Daley, Chief Business Officer and Patrice Rioux, M.D., Ph.D., Chief Medical Officer. The loss or unavailability to us of any of these individuals or key research and development personnel, and particularly if lost to competitors, could have a material adverse effect on our business, prospects, financial condition and operating results. We do not have key-man insurance on any of our employees.

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There is intense competition for qualified scientists and managerial personnel from numerous pharmaceutical and biotechnology companies, as well as from academic and government organizations, research institutions and other entities. In addition, we will rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development strategy. All of our consultants and advisors will be employed by other employers or be self-employed, and will have commitments to or consulting or advisory contracts with other entities that may limit their availability to us. There is no assurance that we will be able to retain key employees and/or consultants. If key employees terminate their employment, or if insufficient numbers of qualified employees are retained, or are not available via recruitment, to maintain effective operations, our development activities might be adversely affected, management's attention might be diverted from managing our operations to hiring suitable replacements and our business might suffer. In addition, we might not be able to locate suitable replacements for any key employees that terminate their employment with us and we may not be able to offer employment to potential replacements on reasonable terms, which could negatively impact our product candidate development timelines and may adversely affect our future revenues and financial condition.

If we do not achieve our projected development and commercialization goals in the time frames we expect and announce, the credibility of our management and our organizational competence may be adversely affected.

For planning purposes, we estimate the timing of the accomplishment of various scientific, clinical, regulatory, market launch and commercialization goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials, the submission of regulatory filings and product launch.

From time to time, we may publicly announce the estimated timing of some of these milestones. All of these milestones will be based on a variety of assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in many cases for reasons beyond our control. For example, clinical trials may be delayed due to factors such as institutional review board, or IRB, approvals, qualification of clinical sites, scheduling conflicts with participating clinicians and clinical institutions and the rate of patient enrollment. In most circumstances, we rely on academic institutions, major medical institutions, governmental research organizations (U.S. or internationally based), clinical research organizations or contract manufacturing organizations to conduct, supervise or monitor some or all aspects of clinical trials involving our product candidates. We will have limited control over the timing and other aspects of these clinical trials.

If we do not meet the milestones as publicly announced (or as projected by various security analysts who follow our Company), our stockholders or potential stockholders may lose confidence in our ability to meet overall product development and commercialization goals and, as a result, the price of our common stock may decline.

Our executive offices and laboratory facility are located near known earthquake fault zones, and the occurrence of an earthquake or other catastrophic disaster could cause damage to our facility and equipment, or that of our third-party manufacturers or single-source suppliers, which could materially impair our ability to continue our product development programs.

Our executive offices and laboratory facility are located in the San Francisco Bay Area near known earthquake fault zones and are vulnerable to significant damage from earthquakes. We and the contract manufacturers and our single-source suppliers of raw materials and critical services are also vulnerable to damage from other types of disasters, including fires, storms, floods, power losses and similar events. If such a disaster were to occur, our ability to continue our product development programs or product commercialization activities could be seriously, or potentially completely, impaired. The insurance we maintain may not be adequate to cover our losses resulting from disasters or other business interruptions.

#### Risks Related to Intellectual Property and Competition

If we are unable to protect our proprietary technology, we may not be able to compete as effectively and our business and financial prospects may be harmed.

Where possible, we seek patent protection for certain aspects of our technology. Patent protection may not be available for some of the drug product candidates we are developing. If we must spend extraordinary time and money protecting 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.

The patent positions of biopharmaceutical products are complex and uncertain.

We own or license issued U.S. and foreign patents and pending U.S. and foreign patent applications related to certain of our drug product candidates. However, these patents and patent applications do not ensure the protection of our intellectual property for a number of reasons, including the following:

We do not know whether our patent applications will result in issued patents. For example, we may not have developed a method for treating a disease before others developed similar methods;

Competitors may interfere with our patent process in a variety of ways. Competitors may claim that they invented the claimed invention prior to us, or file patent applications before we do. Competitors may also claim that we are infringing on their patents and therefore cannot practice our technology as claimed under our patents, if issued.

Competitors may also contest our patents, if issued, by showing the patent examiner that the invention was not original, was not novel or was obvious. In litigation, a competitor could claim that our patents, if issued, are not valid for a number of reasons. If a court agrees, we would lose that patent. As a Company, we have no meaningful experience with competitors interfering with our patents or patent applications;

Enforcing patents is expensive and may absorb significant management time. Management would spend less time and resources on developing drug product candidates. The processes of defending patents and related intellectual property could increase our operating expenses and delay product programs; and

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Receipt of a patent may not provide much practical protection. If we receive a patent with a narrow scope, then it will be easier for competitors to design products that do not infringe on our patent.

In addition, competitors also seek patent protection for their technology. Due to the number of patents in our field of technology, we cannot be certain that we do not infringe on those patents or that we will not infringe on patents granted in the future. If a patent holder believes our drug product candidate infringes on its patent, the patent holder may sue us even if we have received patent protection for our technology. If someone else claims we infringe on their technology, we would face a number of issues, including the following:

- Defending a lawsuit takes significant time is typically very expensive;
- If a court decides that our drug product candidate infringes on the competitor's patent, we may have to pay substantial damages for past infringement;
- A court may prohibit us from selling or licensing the drug product candidate unless the patent holder licenses the patent to us. The patent holder is not required to grant us a license. If a license is available, we may have to pay substantial royalties or grant cross licenses to our patents; and
- Redesigning our drug product candidates so we do not infringe may not be possible or practical and could require substantial funds and time.

It is also unclear whether our trade secrets are adequately protected. While we use reasonable efforts to protect our trade secrets, our employees or consultants may unintentionally or willfully disclose our information to competitors. Enforcing a claim that someone else illegally obtained and is using our trade secrets, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. are sometimes less willing to protect trade secrets. Our competitors may independently develop equivalent knowledge, methods and know-how. We may also support and collaborate in research conducted by government organizations, hospitals, universities or other educational institutions. These research partners may be unwilling to grant us any exclusive rights to technology or products derived from these collaborations prior to entering into the relationship. If we do not obtain required licenses or rights, we could encounter delays in our product development efforts while we attempt to design around other patents or even be prohibited from developing, manufacturing or selling drug product candidates requiring these licenses. There is also a risk that disputes may arise as to the rights to technology or drug product candidates developed in collaboration with other parties.

If we are limited in our ability to utilize acquired or licensed technologies, we may be unable to develop, out-license, market and sell our product candidates, which could prevent new product introductions and/or cause delayed new product introductions.

We have acquired and licensed certain proprietary technologies, discussed in the following risk factors, and plan to further license and acquire various patents and proprietary technologies owned by other parties. The agreements in place are critical to our product development programs. These agreements may be terminated, and all rights to the technologies and product candidates will be lost, if we fail to perform our obligations under these agreements and licenses

in accordance with their terms including, but not limited to, our ability to fund all payments due under such agreements. Our inability to continue to maintain these technologies could materially adversely affect our business, prospects, financial condition and operating results. In addition, our business strategy depends on the successful development of licensed and acquired technologies into commercial products, and, therefore, any limitations on our ability to utilize these technologies may impair our ability to develop, out-license, or market and sell our product candidates, delay new product introductions, and/or adversely affect our reputation, any of which could have a material adverse effect on our business, prospects, financial condition, and operating results.

If the purchase or licensing agreements we entered into are terminated, we will lose the right to use or exploit our owned and licensed technologies.

We entered into a licensing agreement with UCSD for patents and know-how related to PROCYSBI and RP103 and a licensing agreement with Yeda Research and Development Company Limited, or Yeda, for patents originating from Weizmann Institute of Technology and Niigata University, related to use of transglutaminase inhibitors to treat neurological diseases.

UCSD and Yeda may terminate their respective agreements with us upon the occurrence of certain events, including if we challenge the validity of any patents licensed under the respective agreements or if we materially breach our obligations to make certain payments and meet certain diligence milestones within specified time periods, and fail to remedy the breach within the permitted cure periods. Yeda may also terminate its agreement with us if we enter into certain liquidation proceedings. Although we are not currently in breach of these agreements, challenging any patents licensed under these agreements or involved in any liquidation proceedings, there is a risk that we may be in the future, giving UCSD and/or Yeda the right to terminate their respective agreements with us. We have the right to terminate these agreements at any time by giving prior written notice. If the UCSD or Yeda agreements are terminated by either party, we would lose certain of our rights relating to PROCYSBI and RP103 in the case of UCSD and would lose our rights to the Weizmann and Niigata patents in the case of Yeda. Under such circumstances, we would have no further right to use or exploit the patents, know-how and other intellectual property rights relating to those respective technologies. If this happens, we would be required to discontinue sales of PROCYSBI, we will have to delay or terminate some or all of our research and development programs, our financial condition and operating results will be adversely affected, and we may have to cease our operations.

Companies and universities, including those that have licensed product candidates to us for research, clinical development and marketing, are sophisticated competitors that could develop similar products to compete with our products which could reduce our future revenues.

Licensing our product candidates from other companies, universities or individuals does not always prevent them from developing non-identical but competitive products for their own commercial or research purposes, or from pursuing patent protection in areas that are competitive with us. While we seek patent protection for all of our owned and licensed product candidates, our licensors or assignors or other research organizations who created these product candidates are experienced scientists and business people who may continue to do research and development and seek patent protection in the same areas that led to the discovery of the product candidates that are licensed or assigned to us. By virtue of the previous research that led to the

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discovery of the drugs or product candidates that they licensed or assigned to us, these companies, universities or individuals may be able to develop and out-license or market competitive products in less time than might be required to develop a product with which they have no prior experience and may reduce our future revenues from such product candidates. In some instances, information published in the scientific literature can provide insights which could enable development of viable competitive product candidates on an accelerated time frame.

If our competitors succeed in developing products and technologies that are more effective than our own, or if scientific developments change our understanding of the potential scope and utility of our drug product candidates, then our technologies and future drug product candidates may be rendered less competitive.

We face significant competition from industry participants that are pursuing similar technologies that we are pursuing and are developing pharmaceutical products that are competitive with PROCYSBI or our drug product candidates. All of our large pharmaceutical competitors have greater capital resources, larger overall research and development staffs and facilities, and a longer history in drug discovery, development, regulatory approval, manufacturing and marketing than we do. With these additional resources and experience, our competitors may be able to respond to rapid and significant technological changes in the biotechnology and pharmaceutical industries faster than we can.

We expect that the technologies associated with biotechnology research and development will continue to develop rapidly. Our future success will depend in large part on our ability to maintain a competitive position with respect to these technologies. Rapid technological development, as well as new scientific developments, may result in our compounds, drug products, drug product candidates or processes becoming obsolete before we can recover any or all of the expenses incurred to develop them. For example, changes in our understanding of the appropriate population of patients who should be treated with a targeted therapy like we are developing may limit the drug's market potential if it is subsequently demonstrated that only certain subsets of patients should be treated with the targeted therapy.

If our agreements with employees, consultants, advisors and corporate partners fail to protect our intellectual property, proprietary information or trade secrets, it could have a significant adverse effect on us.

We have taken steps to protect our intellectual property and proprietary technology, by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, advisors and corporate and educational institution partners. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure. Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. Furthermore, the laws of some foreign countries may not protect our intellectual property rights to the same extent as do the laws of the U.S.

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## Risks Related to Our Financial Position and Capital Requirements

Our product development and commercialization programs will require substantial future funding which will impact our operational and financial condition.

Excluding PROCYSBI, it will take several years before we are able to develop our other drug product candidates into marketable drug products, if at all. The marketing and sales effort of PROCYSBI and our future approved products, our ability to gain adequate reimbursement, once products are approved for sale, and our product development programs will require substantial additional capital to successfully complete them, arising from costs to:

- conduct research, preclinical testing and human studies and clinical trials;
- establish or contract for pilot scale and commercial scale manufacturing processes and facilities;
- market and distribute PROCYSBI and our future approved products; and
- establish and develop quality control, manufacturing, regulatory, medical, distribution, marketing, sales, finance and administrative capabilities to support these programs.

Our future operating and capital needs will depend on many factors, including:

- the effectiveness of our commercialization activities;
- the scope and results of preclinical testing and human clinical trials;
- the pace of scientific progress in our research and development programs and the magnitude of these programs;
- our ability to obtain, and the time and costs involved in obtaining, regulatory approvals;
- the cost of manufacturing scale-up for new product candidates;
  - our ability to prosecute, maintain and enforce, and the time and costs involved in preparing, filing, prosecuting, maintaining and enforcing, patent claims;
- competing technological and market developments;
- our ability to establish additional collaborations; and
- changes in our existing collaborations.

We base our outlook regarding the need for funds on many uncertain variables. Such uncertainties include the success of our commercial sales of PROCYSBI in the U.S. and efforts to commercialize our future approved products, the success of our research initiatives, regulatory approvals, the timing of events outside our direct control such as negotiations with healthcare payors, potential strategic partners and other factors. In addition, certain product programs may require collaborative agreements with corporate partners with substantial assets and organizations to help with the very substantial funds required and the complex organizational resources required. Such agreements may require substantial time to complete and may not be available in the time frame desired or with acceptable financial terms, if at all. Any of these uncertain events can significantly change our cash requirements as they determine such one-time events as the receipt or payment of major milestones and other payments.

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Significant additional funds from outside financing sources will be required to support our operations and if we are unable to obtain them on acceptable terms, we may be required to cease or reduce further development or sales of PROCYSBI and our drug product programs, to sell some or all of our technology or assets, to merge with another entity or to cease operations.

If we fail to obtain the capital necessary to fund our operations, our operational and financial results will be adversely affected.

As of March 31, 2013, we had an accumulated deficit of approximately \$151.9 million. We expect to continue to incur losses for the foreseeable future and must obtain significant financing to fund our planned operations. Our recurring losses from operations to date raise substantial doubt about our ability to continue as a going concern and, as a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements for the transitional four-month period ended December 31, 2012, with respect to this uncertainty. In addition to the proceeds from this offering, we will need to raise additional capital and/or generate significant revenue at profitable levels to continue to operate as a going concern. In addition, the perception that we may not be able to continue as a going concern may cause third parties to choose not to do business with us due to concerns about our ability to meet our contractual obligations and may adversely affect our ability to raise additional capital.

We believe that without regard to any other future sources of funds, our cash, cash equivalents and short-term investments as of March 31, 2013 of approximately \$58.4 million, plus the net proceeds of approximately \$23.4 million from the second tranche under the HC Royalty loan agreement will be sufficient to meet our projected operational requirements and obligations into the second quarter of 2014.

In addition to this offering, in the future, we may need to sell equity or debt securities to raise additional funds to support, among other things, our development and commercialization programs. The sale of additional equity securities or convertible debt securities will result in additional dilution to our stockholders. Additional financing may not be available on a timely basis, in amounts or on terms satisfactory to us, or at all. We may be unable to raise additional capital due to a variety of factors, including our financial condition, the status of our research and development programs, the status of regulatory reviews for marketing approvals, the status of our commercialization activities, sales of PROCYSBI in the U.S., the execution of our potential launch of PROCYSBI in Europe, if approved for sale, and the general condition of the financial markets. If we fail to raise additional financing when needed, we may have to delay or terminate some or all of our research and development programs, scale back our operations and/or reduce our commercial expenses for PROCYSBI. If such actions are required, our financial condition and operating results will be adversely affected and our current value and potential future value may be significantly reduced.

Our cash flows and capital resources may be insufficient to make required payments on our indebtedness.

The required payments of principal and interest on our indebtedness under the HC Royalty Loan may require a substantial portion, or all, of our available cash to be dedicated to the service of these debt obligations. The loan bears interest at an annual fixed rate of 10.75% and a synthetic royalty based on the amount of PROCYSBI and other future approved product net revenues in a calendar year, and such royalty is payable quarterly. Principal payments under the HC Royalty Loan will become due beginning on the ninth quarterly payment date occurring after the date the second \$25.0 million tranche was funded, or June 2015.

There is no assurance that our business will generate sufficient cash flow or that we will have capital resources in an amount sufficient to enable us to pay our indebtedness to HC Royalty. If our cash flows and capital resources are insufficient to fund these debt service obligations, we may be forced to reduce or delay product development, sales and marketing, and capital and other expenditures and we may be forced to restructure our indebtedness or raise additional capital through the issuance of equity or debt instruments in addition to this offering. We cannot ensure that we will be able to refinance any of our indebtedness or raise additional capital on a timely basis, in sufficient amounts, on satisfactory terms or at all. In addition, the terms of the HC Royalty Loan may limit our ability to pursue any of these financing alternatives and these alternatives may not enable us to meet our scheduled debt service obligations. Failure to meet our debt service obligations may result in an event of default under the HC Royalty Loan, which would permit the lender to accelerate the payment of all of our indebtedness to HC Royalty and interest thereon, take possession of, foreclose on, sell, assign or grant a license to use, our pledged collateral and assign and transfer the pledged stock of our subsidiaries. This could have a material adverse impact on our financial condition and results of operations.

#### Risks Related to this Offering and Our Common Stock

Management may invest or spend the proceeds of this offering in ways with which you may not agree and in ways that may not yield a return to our stockholders.

We will retain broad discretion over the use of proceeds from this offering. We expect to use the net proceeds from this offering to fund our commercial efforts, our clinical and preclinical development programs and other general corporate purposes. A number of variables will influence our actual use of the proceeds from this offering, and our actual uses of the proceeds of this offering may vary substantially from our currently planned uses. Management could choose to spend the net proceeds from this offering in ways in which stockholders may not deem desirable, or in ways that do not improve our operating results or result in a significant return or any return at all for our stockholders.

New investors in our common stock could experience immediate and substantial dilution.

The offering price of our common stock could be substantially higher than what the net tangible book value per share of our common stock is at the time of any offering. As a result, investors of our common stock in this offering could incur immediate and substantial dilution. After giving effect to the sale of our common stock in the maximum aggregate offering amount of \$100,000,000 at an assumed offering price of \$9.37 per share, the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2013, and after deducting aggregate

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gross sales of \$27.3 million of our common stock which occurred under the at-the-market facility through March 31, 2013, estimated offering commissions and expenses payable by us, our net tangible book value as of March 31, 2013 would have been \$100.8 million, or \$1.60 per share of common stock. This represents an immediate increase in the net tangible book value of \$1.05 per share to our existing stockholders and an immediate and substantial dilution in net tangible book value of \$7.77 per share to new investors who purchase our common stock in the offering. The information above does not take into account 6,340,880 shares of our common stock that have been issued under this offering at a weighted average selling price of \$6.05 per share. See "Dilution" for a more detailed discussion of the dilution new investors will incur in this offering.

There are a substantial number of shares of our common stock eligible for future sale in the public market, and the issuance or sale of equity, convertible or exchangeable securities in the market, or the perception of such future sales or issuances, could lead to a decline in the trading price of our common stock.

Any issuance of equity, convertible or exchangeable securities, including for the purposes of raising capital to fund our operations, financing acquisitions and the expansion of our business, will have a dilutive effect on our existing stockholders. In addition, the perceived market risk associated with the possible issuance of a large number of shares of our common stock or securities convertible or exchangeable into a large number of shares of our common stock could cause some of our stockholders to sell their common stock, thus causing the trading price of our common stock to decline. Subsequent sales of our common stock in the open market or the private placement of our common stock or securities convertible or exchangeable into our common stock could also have an adverse effect on the trading price of our common stock. If our common stock price declines, it will be more difficult for us to raise additional capital or we may be unable to raise additional capital at all.

In connection with other collaborations, joint ventures, license agreements or future financings that we may enter into in the future, we may issue additional shares of common stock or other equity securities, and the value of the securities issued may be substantial and create additional dilution to our existing and future common stockholders.

Because we do not intend to pay any cash dividends on our common stock, investors will benefit from an investment in our common stock only if it appreciates in value. Investors seeking dividend income should not purchase shares of our common stock.

We have not declared or paid any cash dividends on our common stock since our inception. We anticipate that we will retain our future earnings, if any, to support our operations and to finance the growth and development of our business and do not expect to pay cash dividends in the foreseeable future. As a result, the success of an investment in our common stock will depend upon any future appreciation in the value of our common stock. There is no guarantee that our common stock will appreciate in value or even maintain its current price. Investors seeking dividend income should not invest in our common stock.

Our stock price is volatile, which could result in substantial losses over short periods of time for our stockholders. The trading volume in our common stock may be relatively small.

Our common stock is quoted on the Nasdaq Global Market. The trading price of our common stock has been and may continue to be volatile. Our operating performance, both financial and in the development of approved products, does and will continue to significantly affect the market price of our common stock. We face a number of risks including those described herein, which may negatively impact the price of our common stock. Some of the factors that may cause the market price of our common stock to fluctuate include:

- sales of PROCYSBI in the U.S. or other launch indicators;
- the decision by the EMA of our MAA for PROCYSBI in the EU;
- the results of ongoing preclinical studies and planned early stage clinical trials of our preclinical drug candidates;
- the results and timing of regulatory reviews relating to our drug candidates;
  - failure of any of our drug candidates, if approved, to achieve commercial success and, in particular, the rate of market penetration and sales growth in the launch period;
- the results of our current and any future clinical trials of our current drug candidates;
- issues in manufacturing our drug candidates or any approved products;
- the entry into, or termination of, key agreements, including key strategic alliance agreements;
- failure to meet security analysts' and investors' expectations;
  - the initiation of, material developments in, or conclusion of litigation to enforce or defend any of our intellectual property rights;
- general and industry-specific economic conditions that may affect our product program expenditures;
- the results of clinical trials conducted by others on drugs that would compete with our drug candidates;
- the loss of key employees;
  - the introduction by others of technological innovations or new commercial products or development of product programs which have a direct negative competitive impact on our products or product development programs;
- changes in estimates or recommendations by securities analysts, if any, who cover our common stock or influence the level of investor confidence in our sector of the equity market;
- future sales of our common stock or exercise of common stock warrants or options;
- changes in the structure of health care payment systems; and
- period-to-period fluctuations in our financial results.

The market price of our common stock also may be adversely impacted by broad market and industry fluctuations including general economic and technology trends, regardless of our operating performance. The Nasdaq Global Market has, from time to time, experienced extreme price and trading volume fluctuations, and the market prices of biopharmaceutical development stage companies such as ours have been extremely volatile. Market prices for securities of pharmaceutical, biotechnology and other life sciences companies in a comparable stage to us have historically been particularly volatile and trading volume in such securities has often been relatively small. Moreover, the stock markets in general have experienced substantial volatility

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that has often been unrelated to the operating performance of individual companies. The stock market also has periods during which industry segments, such as biotechnology, are in volatile swings of greater or lesser favor as investments. These swings in the investment in a sector (periods of net sales or purchases of equity securities) will directly affect the stock prices of many companies in the sector and, in particular, those companies that do not have conventional measures of financial and business health such as sales, earnings, growth rates, profitability and other measures.

These broad market fluctuations, during which our stage of company and our industry may experience a stronger degree of market sensitivity, will adversely affect the trading price of our common stock. In the past, following periods of volatility in the market resulting in substantial price declines of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation can result in substantial costs and diversion of management attention and resources, which could significantly harm our profitability and reputation.

We can issue shares of preferred stock that may adversely affect the rights of a stockholder of our common stock.

Our certificate of incorporation authorizes us to issue up to 15,000,000 shares of preferred stock with designations, rights and preferences determined from time-to-time by our board of directors. Accordingly, our board of directors is empowered, without stockholder approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights superior to those of stockholders of our common stock.

Anti-takeover provisions under Delaware law, in our stockholder rights plan and in our certificate of incorporation and bylaws may prevent or complicate attempts by stockholders to change the board of directors or current management and could make a third-party acquisition of us difficult.

We are incorporated in Delaware. Certain anti-takeover provisions of Delaware law as currently in effect may make a change in control of our Company more difficult, even if a change in control may be beneficial to the stockholders. Our board of directors has the authority to issue up to 15,000,000 shares of preferred stock, none of which are issued or outstanding. The rights of holders of our common stock are subject to the rights of the holders of any preferred stock that may be issued. The issuance of preferred stock could make it more difficult for a third-party to acquire a majority of our outstanding voting stock. Our charter contains provisions that may enable our management to resist an unwelcome takeover attempt by a third party, including: a prohibition on actions by written consent of our stockholders; the fact that stockholder meetings must be called by our board of directors; and provisions requiring stockholders to provide advance notice of proposals. Delaware law also prohibits corporations from engaging in a business combination with any holders of 15% or more of their capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction. Our board of directors may use these provisions to prevent changes in the management and control of our Company. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future.

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We are a party to a stockholder rights plan, also referred to as a poison pill, which is intended to deter a hostile takeover of us by making such proposed acquisition more expensive and less desirable to the potential acquirer. The stockholder rights plan and our certificate of incorporation and bylaws, as amended, contain provisions that may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could limit the price that investors might be willing to pay in the future for shares of our common stock.

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USE OF PROCEEDS

We expect to use the net proceeds from the offering to fund our commercial efforts, our clinical and other general corporate purposes. Pending these uses, we intend to invest the net proceeds in short-term, investment grade, interest-bearing securities.

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## DILUTION

Purchasers of common stock offered by this Amendment, Prospectus Supplement and the Accompanying Prospectus will suffer immediate and substantial dilution in the net tangible book value per share of common stock. Our net tangible book value as of March 31, 2013 was approximately \$30.4 million, or approximately \$0.55 per share of common stock. Net tangible book value per share represents the amount of total tangible assets less total liabilities other than warrant liabilities (non-cash), divided by the number of shares of our common stock outstanding as of March 31, 2013.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers in this offering and the net tangible book value per share of our common stock immediately after this offering. After giving effect to the assumed sale of shares of our common stock in the aggregate amount of \$72.7 million at an assumed offering price of \$9.37 per share, the last reported sale price of our common stock on July 2, 2013, and after deduction of commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2013 would have been approximately \$100.8 million, or \$1.60 per share of common stock. This represents an immediate increase in net tangible book value of \$1.05 per share of common stock to our existing stockholders and an immediate dilution in net tangible book value of \$7.77 per share of common stock to investors participating in this offering. The following table illustrates this per share dilution:

Assumed offering price per share	\$9.37
Net tangible book value per share as of March 31, 2013	\$0.55
Increase per share attributable to this offering	1.05
As adjusted net tangible book value per share after the offering as of March 31, 2013, after giving effect to this offering	1.60
Net dilution per share to investors participating in this offering	\$7.77

Changes in the assumed offering price of \$9.37 per share would not affect our as adjusted net tangible book value after this offering because this offering is currently limited to \$72.7 million. However, each \$1.00 increase (decrease) in the assumed offering price of \$9.37 per share would increase (decrease) our as adjusted per share net tangible book value after this offering by approximately \$0.88 per share, and the dilution per share to new investors by approximately \$8.66 per share, assuming that the aggregate dollar amount of shares offered by us, as set forth above, remains at \$72.7 million and after deducting the commissions and estimated offering expenses payable by us. We may also increase or decrease the aggregate dollar amount of shares we are offering from the amount set forth above. The information discussed above is illustrative only and will adjust based on the actual offering price, the actual number of shares that we offer and sell in this offering, and other terms of this offering determined at the time of each offer and sale.

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The information above and in the foregoing table is based upon 55.4 million shares of our common stock outstanding as of March 31, 2013. The information above and in the foregoing table excludes:

- 7.9 million shares of our common stock issuable upon the exercise of options outstanding under our stock option plans at a weighted average exercise price of \$ 5.76 per share;
- 1.8 million shares of our common stock available for future issuance under our stock option plans; and
- 4.0 million shares of our common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$3.02 per share.

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## CAPITALIZATION

The following table sets forth our cash, cash equivalents and short-term investments and our capitalization as of March 31, 2013:

- on an actual basis; and
- on an as adjusted basis to give effect to the sale of shares of common stock having an aggregate offering price of up to \$72.7 million in this offering at the offering price of \$9.37 per share, the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2013, after deducting sales discounts and estimated offering expenses.

This capitalization table should be read in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included in our transition report on Form 10-KT for the transition period ended December 31, 2012, as amended, and our quarterly report on Form 10-Q for the quarter ended March 31, 2013, as amended.

	As of March 31, 2013	
	Actual	As Adjusted(1)
Cash, cash equivalents and short-term investments	\$58,411,000	\$128,791,090
Long-term debt	\$25,000,000	\$25,000,000
Stockholders' equity:		
Preferred stock, \$0.001 par value, 15,000,000 shares authorized, none issued and outstanding, actual and as adjusted	\$—	\$—
Common stock, \$0.001 par value, 150,000,000 shares authorized, 55,431,651 issued and outstanding, actual; 63,191,676 issued and outstanding, as adjusted	55,432	63,192
Additional paid-in capital	175,132,000	245,504,330
Accumulated other comprehensive loss	(203,000 )	(203,000 )
Deficit accumulated during development stage	(151,865,000)	(151,865,000)
Total stockholders' equity	\$23,119,432	\$93,499,522

(1) Does not include approximately \$23.7 million drawn under the HC Royalty loan agreement on May 21, 2013, net of debt issuance costs.

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The number of shares of our common stock to be in the actual and as adjusted columns in the table above excludes the following shares of our common stock as of March 31, 2013:

- 7.9 million shares of our common stock issuable upon the exercise of options outstanding under our stock option plans at a weighted average exercise price of \$5.76 per share;
- 1.8 million shares of our common stock available for future issuance under our stock option plans; and
- 4.0 million shares of our common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$3.02 per share.

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DESCRIPTION OF SECURITIES WE ARE OFFERING

Under the amended and restated sales agreement that we have entered into with Cowen, we may issue and sell from time to time up to \$100,000,000 of our common stock through Cowen as our sales agent. As of the date of this Amendment, we have offered and sold approximately 6.3 million shares of our common stock under the sales agreement at a weighted average selling price of \$6.05 per share for net proceeds of approximately \$37.2 million. The material terms and provisions of our common stock and each other class of our securities which qualifies or limits our common stock are described under the caption "Description of Our Capital Stock" starting on page 6 of the Accompanying Prospectus.

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## PLAN OF DISTRIBUTION

On April 30, 2012, we entered into a sales agreement with Cowen, under which we contemplated the issuance and sale from time to time of up to \$40,000,000 of our common stock through Cowen as our sales agent. On July 3, 2013, we amended and restated the sales agreement with Cowen, under which we may issue and sell from time to time up to \$100,000,000 of our common stock through Cowen as our sales agent. As of the date of this Amendment, we have offered and sold approximately 6.3 million shares of our common stock under the sales agreement at a weighted average selling price of \$6.05 per share for net proceeds of approximately \$37.2 million. Sales of our common stock, if any, will be made at market prices by any method that is deemed to be an "at the market" offering as defined in Rule 415 under the Securities Act, including sales made directly on The Nasdaq Global Market and any other trading market for our common stock, and sales to or through a market maker other than on an exchange.

Cowen will offer our common stock subject to the terms and conditions of the amended and restated sales agreement on a daily basis or as otherwise agreed upon by us and Cowen. We will designate the maximum amount of common stock to be sold through Cowen on a daily basis or otherwise determine such maximum amount together with Cowen. Subject to the terms and conditions of the amended and restated sales agreement, Cowen will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. We may instruct Cowen not to sell common stock if the sales cannot be effected at or above the price designated by us in any such instruction. Cowen or we may suspend the offering of our common stock being made through Cowen under the amended and restated sales agreement upon proper notice to the other party. Cowen and we each have the right, by giving written notice as specified in the amended and restated sales agreement, to terminate the sales agreement in each party's sole discretion at any time.

The aggregate compensation payable to Cowen as sales agent equals 3.0% of the gross sales price of the shares sold through it pursuant to the amended and restated sales agreement. We estimate that the total expenses of the offering payable by us, excluding commissions payable to Cowen under the amended and restated sales agreement, will be approximately \$150,000.

The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such common stock.

Cowen will provide written confirmation to us following the close of trading on The Nasdaq Global Market as applicable, each day in which common stock is sold through it as sales agent under the amended and restated sales agreement. Each confirmation will include the number of shares of common stock sold through it as sales agent on that day, the gross sales price per share, the net proceeds to us and the compensation payable by us to Cowen.

We will report at least quarterly the number of shares of common stock sold through Cowen under the sales agreement, the net proceeds to us and the compensation paid by us to Cowen in connection with the sales of common stock.

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Settlement for sales of common stock will occur, unless the parties agree otherwise, on the third business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sales of our common stock on our behalf, Cowen may be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to Cowen may be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to Cowen against certain liabilities, including liabilities under the Securities Act. As sales agent, Cowen will not engage in any transactions that stabilizes our common stock.

Our common stock is listed on The Nasdaq Global Market and trades under the symbol "RPTP." The transfer agent of our common stock is American Stock Transfer & Trust Company, LLC.

Cowen and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received and, may in the future receive, customary fees.

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## LEGAL MATTERS

Latham & Watkins LLP, Menlo Park, California will pass upon the validity of the securities being offered by this Amendment. Certain matters will be passed upon for Cowen by Goodwin Procter LLP, New York, New York.

## EXPERTS

Burr Pilger Mayer, Inc., an independent registered public accounting firm, has audited the consolidated financial statements of Raptor Pharmaceutical Corp. included in our Transition Report on Form 10-KT, for the period ended December 31, 2012 as set forth in their report (which report expresses an unqualified opinion and includes an explanatory paragraph regarding uncertainty about our ability to continue as a going concern as described in Note 1 to such consolidated financial statements) and the effectiveness of internal control over financial reporting as of December 31, 2012, which is incorporated by reference in this Amendment and the Prospectus Supplement and elsewhere in our registration statement of which this Amendment and the Prospectus Supplement form a part. Such consolidated financial statements of Raptor Pharmaceutical Corp. are incorporated by reference in reliance on Burr Pilger Mayer, Inc.'s reports, given on the authority of such firm as experts in accounting and auditing.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to another document that we have filed separately with the SEC. You should read the information incorporated by reference because it is an important part of this Amendment, the Prospectus Supplement and the Accompanying Prospectus. Any information incorporated by reference into this Amendment, the Prospectus Supplement and the Accompanying Prospectus is considered to be part of this Amendment, the Prospectus Supplement and the Accompanying Prospectus from the date we file that document. We incorporate by reference the following information or documents that we have filed with the SEC (Commission File No. 000-25571), which shall not include, in each case, documents, or information deemed to have been furnished and not filed in accordance with SEC rules:

- Our Transition Report on Form 10-KT for the transition period from September 1, 2012 to December 31, 2012
- (a) filed with the Commission on March 14, 2013, as amended by Form 10-KT/A filed with the Commission on June 19, 2013;
- (b) Our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2013 filed with the Commission on May 8, 2013, as amended by Form 10-Q/A filed with the Commission on June 19, 2013;
- (c) Our Current Report on Form 8-K filed with the Commission on April 9, 2013;
- (d) Our Current Report on Form 8-K filed with the Commission on May 1, 2013;
- (e) Our Current Report on Form 8-K filed with the Commission on May 24, 2013;
- (f) Our Current Report on Form 8-K filed with the Commission on June 25, 2013;

- (g) Our Current Report on Form 8-K filed with the Commission on July 2, 2013;  
The description of our common stock contained in our Registration Statement on Form 10-SB filed with the SEC on March 17, 1999 (File No. 000-25571), as amended by that certain Registration Statement on Form 10-SB/A (h) filed on August 19, 1999 (File No. 000-25571), which description has been updated by our Joint Proxy Statement on Form S-4 filed on August 19, 2009 (File No. 333-161424), including any other amendment or report filed for the purpose of updating such description; and  
The description of the our Series A Participating Preferred Stock contained in our Registration Statement on (i) Form 8-A filed on May 16, 2005 (File No. 000-25571), pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this Amendment, the Prospectus Supplement and the Accompanying Prospectus or in a later filed document or other report that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this Amendment, the Prospectus Supplement and the Accompanying Prospectus. Information in such future filings updates and supplements the information provided in this Amendment, the Prospectus Supplement and the Accompanying Prospectus. These documents include proxy statements and periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and, to the extent they are considered filed and except as described above, Current Reports on Form 8-K. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will provide to each person, including any beneficial owner, to whom this Amendment, the Prospectus Supplement and the Accompanying Prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this Amendment, the Prospectus Supplement and the Accompanying Prospectus, but not delivered with this Amendment, the Prospectus Supplement and the Accompanying Prospectus, including exhibits which are specifically incorporated by reference into such documents. If you would like to request documents from us, please send a request in writing or by telephone to us at the following address:

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Raptor Pharmaceutical Corp.  
5 Hamilton Landing, Suite 160  
Novato, CA 94949  
(415) 408-6200  
Attn: Secretary

#### Information on Our Website

Information on any Raptor website, any subsection, page, or other subdivision of any Raptor website, or any website linked to by content on any Raptor website, is not part of this Amendment, the Prospectus Supplement and the Accompanying Prospectus and you should not rely on that information unless that information is also in this Amendment, the Prospectus Supplement and the Accompanying Prospectus or incorporated by reference in this Amendment, the Prospectus Supplement and the Accompanying Prospectus.

#### Trademark Notice

Raptor, our logos and all of our product candidates and trade names are our registered trademarks or our trademarks in the United States and in other select countries. Other third-party logos and product/trade names are registered trademarks or trade names of their respective companies.

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