

AMICUS THERAPEUTICS INC

Form 10-K

February 06, 2009

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2008  
Commission File Number 001-33497

Amicus Therapeutics, Inc.  
(Exact name of registrant as specified in its charter)

Delaware

71-0869350

(State or other jurisdiction of  
incorporation or organization)

(IRS Employer  
Identification No.)

6 Cedar Brook Drive, Cranbury, NJ 08512  
(Address of principal executive offices)

Telephone: (609) 662-2000

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

Title of each class

Name of each exchange on which registered

Common Stock, par value \$0.01 per share

The NASDAQ Stock Market LLC

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer or a smaller reporting company. See definition of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller Reporting Company

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

The aggregate market value of the 6,307,947 shares of voting common equity held by non-affiliates of the registrant, computed by reference to the closing price as reported on the NASDAQ, as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2008) was approximately \$67,368,874. Shares of voting and non-voting stock held by executive officers, directors and holders of more than 5% of the outstanding stock have been excluded from this calculation because such persons or institutions may be deemed affiliates. This determination of affiliate status is not a conclusive determination for other purposes.

As of January 29, 2009, there were 22,642,716 shares of common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE:** Portions of the Proxy Statement for the registrant's 2009 Annual Meeting of Stockholders which is to be filed subsequent to the date hereof are incorporated by reference into Part III of this Annual Report on Form 10-K.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This annual report on Form 10-K contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this annual report on Form 10-K regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words anticipate, believe, estimate, expect, intend, may, predict, project, will, would and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

The forward-looking statements in this annual report on Form 10-K include, among other things, statements about:

our plans to develop, seek regulatory approval for and commercialize Amigal, Plicera and AT2220;

our ongoing and planned discovery programs, preclinical studies and clinical trials;

our ability to enter into selective collaboration arrangements;

the timing of and our ability to obtain agreement with the regulatory agencies on the design of our Phase 3 program for Amigal;

the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;

the rate and degree of market acceptance and clinical utility of our products;

our ability to quickly and efficiently identify and develop product candidates;

the extent to which our scientific approach may potentially address a broad range of diseases across multiple therapeutic areas;

our commercialization, marketing and manufacturing capabilities and strategy;

our intellectual property position;

our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;

our belief about our ability to fund our operating expenses; and

our eligibility to receive milestone payments under our collaboration agreement with Shire Pharmaceuticals Ireland Ltd.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this annual report on Form 10-K, particularly in Part I, Item 1A Risk Factors, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations or investments we may make.

You should read this annual report on Form 10-K and the documents that we incorporate by reference in this annual report on Form 10-K completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements.



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**PART I**

**Item 1. BUSINESS.**

**Overview**

We are a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of a new class of orally-administered, small molecule drugs, known as pharmacological chaperones, for the treatment of a range of human genetic diseases. Our lead product candidates in development are Amigal (migalastat hydrochloride) for Fabry disease, Plicera (isofagomine tartrate) for Gaucher disease and AT2220 (1-deoxynojirimycin HCl) for Pompe disease. We completed our Phase 2 clinical trials of Amigal and are currently conducting Phase 2 clinical trials of Plicera and AT2220. Although Fabry, Gaucher and Pompe are relatively rare diseases, they represent substantial commercial markets due to the severity of the symptoms and the chronic nature of the diseases. The worldwide net product sales for the five currently approved therapeutics to treat Fabry, Gaucher and Pompe disease were approximately \$2.2 billion in 2008, as publicly reported by the companies that market these therapeutics.

Our goal is to become a leading biopharmaceutical company focused on the discovery, development and commercialization of pharmacological chaperone therapies for the treatment of a wide range of human diseases. Our initial clinical efforts are currently focused on developing pharmacological chaperones for the treatment of lysosomal storage disorders, which are chronic genetic diseases, such as Fabry, Gaucher and Pompe that frequently result in severe symptoms. We also believe our technology may be broadly applicable to other diseases for which protein stabilization and improved folding may be beneficial, including certain neurodegenerative and genetically-based metabolic disorders.

Fabry, Gaucher and Pompe are among certain human diseases which result from mutations in specific genes that, in many cases, lead to the production of proteins with reduced stability. Proteins with such mutations may not fold into their correct three-dimensional shape and are generally referred to as misfolded proteins. Misfolded proteins are often recognized by cells as having defects and, as a result, may be eliminated prior to reaching their intended location in the cell. The reduced biological activity of these proteins leads to impaired cellular function and ultimately to disease. Our novel approach to the treatment of human genetic diseases consists of using pharmacological chaperones that selectively bind to the target protein; increasing the stability of the protein and helping it fold into the correct three-dimensional shape. This allows proper trafficking of the protein, thereby increasing protein activity, improving cellular function and potentially reducing cell stress.

The current standard of treatment for Fabry, Gaucher and Pompe is enzyme replacement therapy (ERT). This therapy compensates for the reduced level of activity of specialized proteins called enzymes through regular infusions of recombinant enzyme. Instead of adding enzymes from an external source by intravenous infusion, our approach uses small molecule, orally-administered pharmacological chaperones to restore the function of the enzyme that is already made by the patient's own body. We believe our product candidates may have advantages relative to ERT relating to bio-distribution and ease of use, potentially improving treatment of these diseases.

In order to further the development of our pharmacological chaperone therapies and share the costs of such development, in November 2007, we entered into a strategic collaboration with Shire Pharmaceuticals Ireland Ltd. (Shire), a subsidiary of Shire plc, to jointly develop our three lead pharmacological chaperone compounds for lysosomal storage disorders. Shire will receive rights to commercialize these products outside of the United States (U.S.). We retain all rights to commercialize these products in the U.S.

**Our Lead Programs**

We have three compounds in clinical development, each of which targets lysosomal storage disorders. Each of these disorders results from the deficiency of a single enzyme.

*Amigal for Fabry disease.* We are developing Amigal for the treatment of Fabry disease. As previously disclosed in August 2008, Amicus completed an End of Phase 2 meeting for Amigal with the U.S. Food and Drug Administration (FDA). Following this End of Phase 2 meeting, we continued discussions with the FDA in the second half of 2008. The FDA indicated that it supports a Phase 3 clinical trial comparing Amigal to placebo based on a surrogate primary endpoint of the change in the amount of kidney GL-3, the substrate that accumulates in the cells of Fabry patients. We plan to continue discussions with the FDA through a Special Protocol Assessment (SPA) procedure that commenced in the fourth quarter of 2008 in



order to finalize how the primary endpoint will be measured. We expect to complete the final protocol in the second quarter of 2009. Based on discussions with the European Medicines Agency (EMA), we also plan to initiate a separate clinical study designed to evaluate the safety and efficacy of Amigal versus ERT in Fabry patients. We and our partner, Shire, plan additional discussions with the EMA in the first half of 2009 to finalize the design of this study. In parallel with the regulatory process, 23 of the original 26 patients who participated in the Phase 2 clinical trial of Amigal continue to be treated with Amigal in the voluntary Phase 2 extension study to characterize the long term safety and efficacy and evaluate additional doses and dose regimens. Data from this extension study are expected to be available in the first quarter of 2009 and the results will be used to finalize the dose and regimen for the Phase 3 program.

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*Plicera for Gaucher disease.* We are developing Plicera for the treatment of Gaucher disease. A Phase 2 clinical trial of Plicera in Gaucher patients naïve to ERT is ongoing. This 6-month study is designed to evaluate safety as well as to demonstrate trends of efficacy as measured by the standard endpoints in Gaucher disease. Target enrollment of 16 patients for this study was surpassed and the results are expected to be available in the third quarter of 2009. In addition, we are working closely with our partner, Shire, to prepare for Phase 3 development of Plicera pending the results of the ongoing Phase 2 trial.

*AT2220 for Pompe disease.* We are developing AT2220 for the treatment of Pompe disease. A Phase 2 clinical trial of AT2220 (1-deoxynojirimycin HCl) in adult Pompe patients is ongoing. The trial includes an 11-week treatment period with an optional extension study. The objectives of the trial include the evaluation of the safety and pharmacodynamics of multiple doses and regimens of AT2220. The results of this study are expected to be available in the second half of 2009. In addition, we are continuing to conduct preclinical animal studies to evaluate the effects of administering AT2220 in combination with ERT. Encouraging preliminary results were announced at the American Society of Human Genetics conference in November 2008. These results indicated that AT2220 in combination with ERT increases the stability and tissue uptake of ERT. We are conducting additional preclinical proof-of-concept studies to determine the feasibility of a combination that may be appropriate for Pompe patients who are not amenable to chaperone monotherapy. We expect to announce additional results in the first quarter of 2009.

In addition, we continue to invest in research and development to assess the potential for using pharmacological chaperones to treat a broader range of human genetic diseases beyond lysosomal storage diseases. As part of this effort, we continue to conduct preclinical studies in Parkinson's disease and are investing in new research aimed at evaluating disease targets for other neurodegenerative and genetically-based metabolic disorders. In September 2008, the Company entered into a lease for laboratory space for a small scale research facility in San Diego, CA. The facility supports ongoing research into new applications of the Company's platform technology.

### **Our Pharmacological Chaperone Technology**

In the human body, proteins are involved in almost every aspect of cellular function. Proteins are linear strings of amino acids that fold and twist into specific three-dimensional shapes in order to function properly. Certain human diseases result from mutations that cause changes in the amino acid sequence of a protein which reduce its stability and may prevent it from folding properly. The majority of genetic mutations that lead to the production of less stable or misfolded proteins are called missense mutations. These mutations result in the substitution of a single amino acid for another in the protein. Because of this error, missense mutations often result in proteins that have a reduced level of biological activity. In addition to missense mutations, there are also other types of mutations that can result in proteins with reduced biological activity.

Proteins generally fold in a specific region of the cell known as the endoplasmic reticulum (ER). The cell has quality control mechanisms that ensure that proteins are folded into their correct three-dimensional shape before they can move from the ER to the appropriate destination in the cell, a process generally referred to as protein trafficking. Misfolded proteins are often eliminated by the quality control mechanisms after initially being retained in the ER. In certain instances, misfolded proteins can accumulate in the ER before being eliminated.

The retention of misfolded proteins in the ER interrupts their proper trafficking, and the resulting reduced biological activity can lead to impaired cellular function and ultimately to disease. In addition, the accumulation of misfolded proteins in the ER may lead to various types of stress on cells, which may also contribute to cellular dysfunction and disease.

At Amicus, we have developed a novel approach to address human genetic diseases. We use small molecule drugs, which are called pharmacological chaperones, to selectively bind to a target protein and increase its stability. The binding of the chaperone molecule helps the protein fold into its correct three-dimensional shape. This allows the protein to be trafficked from the ER to the appropriate location in the cell, thereby increasing protein activity, improving cellular function and potentially reducing cell stress.

Our proprietary approach to the discovery of pharmacological chaperone drug candidates involves the use of rapid molecular and cell-based screening methods combined with our understanding of the intended biological function of proteins implicated in disease. We use this knowledge to select and develop compounds with desirable properties. In

many cases, we are able to start with specific molecules and classes of compounds already known to interact with the target protein but not used previously as therapies. This can greatly reduce the time and cost of the early stages of drug discovery and development.

We believe our technology may be broadly applicable to other diseases for which protein stabilization and improved folding may be beneficial, including certain types of neurodegenerative and genetically-based metabolic disorders. We are also exploring other applications in which the ability of pharmacological chaperones to increase the activity of normal proteins may provide a therapeutic benefit.

**Table of Contents****Potential Advantages of Pharmacological Chaperones for the Treatment of Lysosomal Storage Disorders**

To date, we have focused on developing pharmacological chaperones for the treatment of lysosomal storage disorders. Lysosomal storage disorders are a type of metabolic disorder characterized by mutations in lysosomal enzymes, which are specialized proteins that break down cellular substrates in a part of the cell called the lysosome. The current therapeutic standard of care for the most common lysosomal storage disorders is enzyme replacement therapy, which involves regular infusions of recombinant human enzyme to compensate for the deficient lysosomal enzyme. We believe that pharmacological chaperone therapy may have advantages relative to enzyme replacement therapy for the treatment of lysosomal storage disorders, including tissue distribution, ease of use and method of manufacturing. The following table compares some features of enzyme replacement therapy to pharmacological chaperone therapy.

| <b>Product Characteristic</b> | <b>Enzyme Replacement Therapy</b>               | <b>Pharmacological Chaperone Therapy</b>   |
|-------------------------------|---|--|
| <i>Biodistribution</i>        | Variable tissue distribution                    | Broad tissue distribution, including brain |
| <i>Ease of Use</i>            | Weekly or every other week intravenous infusion | Oral administration                        |
| <i>Manufacturing</i>          | Recombinant protein manufacturing               | Chemical synthesis                         |

An additional therapeutic approach to the treatment of certain lysosomal storage disorders is substrate reduction therapy. We believe our pharmacological chaperone therapies may have advantages relative to substrate reduction therapy as well. Like pharmacological chaperone therapies, substrate reduction therapy uses orally-administered small molecules; however, the underlying mechanism of action is very different. Substrate reduction therapies are designed to prevent the production of the substrate that accumulates in disease by inhibiting an enzyme required to make the substrate in cells, which is not the same enzyme that is deficient in the disease. Importantly, if synthesis of the substrate is inhibited it cannot perform its normal biological functions. Additionally, the enzyme that is inhibited is needed to make other molecules that are used in other biological processes. As a result, inhibiting this enzyme may have adverse effects that are difficult to predict. By contrast, our pharmacological chaperones are designed to bind directly to the enzyme deficient in the disease, increasing its stability and helping it fold into its correct three-dimensional shape. This in turn enables proper trafficking to the lysosome where the enzyme can directly decrease substrate accumulation.

To date, one substrate reduction therapy product has received regulatory approval in the U.S. and the European Union (EU) for the treatment of one lysosomal storage disorder. Zavesca<sup>®</sup>, a substrate reduction therapy product commercialized by Actelion, Ltd., is approved for the treatment of Gaucher disease in the U.S., the EU and other countries.

**Table of Contents****Our Lead Product Candidates**

The following table summarizes key information about our product candidates. All of our current product candidates are orally-administered, small molecules based on our pharmacological chaperone technology.

| <b>Product Candidate</b>                 | <b>Indication</b> | <b>Stage of Development</b> | <b>Worldwide Commercial Rights</b> |
|--|-------------------|-----------------------------|------------------------------------|
| <b>Amigal</b> (migalastat hydrochloride) | Fabry             | Phase 2 Complete            | Amicus U.S.,                       |
|  | Disease           | Phase 3 in Planning         | Shire ex-U.S.                      |
| <b>Plicera</b> (isofagomine tartrate)    | Gaucher           | Phase 2                     | Amicus U.S.,                       |
|  | Disease           | Ongoing                     | Shire ex-U.S.                      |
| <b>AT2220</b> (1-deoxynojirimycin HCl)   | Pompe             | Phase 2                     | Amicus U.S.,                       |
|  | Disease           | Ongoing                     | Shire ex-U.S.                      |

**Amigal for Fabry Disease*****Overview***

Our most advanced product candidate, Amigal, is an orally-administered, small molecule pharmacological chaperone for the treatment of Fabry disease. In November 2007, we entered into a partnership with Shire to develop Amigal. We completed four Phase 2 clinical trials of Amigal in 2007. The primary objective of the Phase 2 trials was to evaluate the safety and tolerability of treatment with Amigal. The secondary objective was to evaluate certain pharmacodynamic measures of treatment, including effects on a-GAL (the target enzyme deficient in Fabry patients) and levels of GL-3 (the substrate that builds up in the cells of patients) in cells and tissues affected by the disease. An additional objective was the preliminary assessment of cardiac and renal function. The four open-label, multi-national Phase 2 trials of Amigal enrolled 18 men and 9 women with Fabry disease between the ages of 17 and 65. The four studies examined various dose levels and frequencies of Amigal administration and had 12 or 24 week primary treatment arms with an optional treatment extension.

Twenty-six patients completed the primary treatment arms and all entered the optional treatment extension. The 26 patients had 21 different missense genetic mutations that cause Fabry disease. The mutations represented the full spectrum of Fabry patients, including those with both early-onset and late-onset forms of the disease.

The key findings in the Phase 2 studies were:

Amigal was generally safe and well-tolerated at all doses evaluated and no drug-related serious adverse events were reported.

Amigal increased the level of the enzyme deficient in Fabry patients in 24 of 26 study subjects.

Amigal was shown to reduce the accumulated substrate in a majority of study subjects.

Renal and cardiac function results were encouraging, including those seen in patients treated for nearly two years.

Responses in patients with different Fabry mutations were consistent with the results of in vitro testing, thus confirming the ability to use pharmacogenetics to select likely responders for future studies.

Twenty-three of the 26 patients continue to receive Amigal in a voluntary extension study.

Based on the results of these Phase 2 clinical trials, Amicus and Shire engaged in discussions with FDA and the EMEA regarding plans for a global Phase 3 clinical development program for Amigal. As previously disclosed in August 2008, we completed a successful End of Phase 2 meeting with the FDA. At that time, the FDA indicated that the data from the completed Phase 2 clinical studies of Amigal support the initiation of Phase 3 development and that

Amigal was eligible for Accelerated Approval under Subpart H regulation. The FDA further indicated at that time that it was not opposed to the use of a surrogate primary endpoint, pending further discussions with Amicus. Following this End of Phase 2 meeting, we continued discussions with the FDA in the second half of 2008. The FDA has indicated that it supports a Phase 3 clinical trial comparing Amigal to placebo based on a surrogate primary endpoint of the change in the amount of kidney GL-3, the substrate that accumulates in the cells of Fabry patients. We plan to continue discussions with the FDA through a SPA procedure that commenced in the fourth quarter of 2008 in order to finalize how the primary endpoint will be measured. We expect to complete the final protocol in the second quarter of 2009.

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Based on discussions with the EMEA, we also plan to initiate a separate clinical study designed to evaluate the safety and efficacy of Amigal versus ERT in Fabry patients. Amicus and Shire plan additional discussions with the EMEA to finalize the design of this study.

In parallel with the Phase 3 regulatory discussions, 23 of the original 26 patients from the Phase 2 studies continue to be treated in a voluntary extension study to characterize the long-term safety and efficacy of Amigal and to evaluate additional doses and dose regimens. Data from this extension study are expected to be available in the first quarter of 2009 and the results will be used to finalize the dose and regimen for the Phase 3 studies.

In February 2004, the FDA granted orphan drug designation to Amigal for the treatment of Fabry disease and in March 2006, the EMEA recommended orphan medicinal product designation for Amigal.

### ***Causes of Fabry Disease and Rationale for Use of Amigal***

Fabry disease is a lysosomal storage disorder resulting from a deficiency in a-GAL. Symptoms can be severe and debilitating, including kidney failure and increased risk of heart attack and stroke. The deficiency of a-GAL in Fabry patients is caused by inherited genetic mutations. Certain of these mutations cause changes in the amino acid sequence of a-GAL that may result in the production of a-GAL with reduced stability that does not fold into its correct three-dimensional shape. Although a-GAL produced in patient cells often retains the potential for some level of biological activity, the cell's quality control mechanisms recognize and retain misfolded a-GAL in the ER, until it is ultimately moved to another part of the cell for degradation and elimination. Consequently, little or no a-GAL moves to the lysosome, where it normally breaks down GL-3. This leads to accumulation of GL-3 in cells, which is believed to be the cause of the symptoms of Fabry disease. In addition, accumulation of the misfolded a-GAL enzyme in the ER may lead to stress on cells and inflammatory-like responses, which may contribute to cellular dysfunction and disease.

Amigal is designed to act as a pharmacological chaperone for a-GAL by selectively binding to the enzyme, which increases its stability and helps the enzyme fold into its correct three-dimensional shape. This stabilization of a-GAL allows the cell's quality control mechanisms to recognize the enzyme as properly folded so that trafficking of the enzyme to the lysosome is increased, enabling it to carry out its intended biological function, the metabolism of GL-3. As a result of restoring the proper trafficking of a-GAL from the ER to the lysosome, Amigal also reduces the accumulation of misfolded protein in the ER, which may alleviate stress on cells and some inflammatory-like responses that may be contributing factors in Fabry disease.

Because Amigal increases levels of a patient's naturally produced a-GAL, those Fabry disease patients with a missense mutation or other genetic mutations that result in production of a-GAL that is less stable but with some residual enzyme activity are the ones most likely to respond to treatment with Amigal. We estimate that the majority of patients with Fabry disease may respond to pharmacological chaperone therapy. Patients with genetic mutations leading to a partially made a-GAL enzyme or a-GAL enzyme with an irreversible loss of activity are less likely to respond to treatment with Amigal.

### ***Fabry Disease Background***

The clinical manifestations of Fabry disease span a broad spectrum of severity and roughly correlate with a patient's residual a-GAL levels. The majority of currently treated patients are referred to as classic Fabry disease patients, most of whom are males. These patients experience disease of various organs, including the kidneys, heart and brain, with disease symptoms first appearing in adolescence and typically progressing in severity until death in the fourth or fifth decade of life. A number of recent studies suggest that there are a large number of undiagnosed males and females that have a range of Fabry disease symptoms, such as impaired cardiac or renal function and strokes, that usually first appear in adulthood.

Individuals with this type of Fabry disease, referred to as later-onset Fabry disease, tend to have higher residual a-GAL levels than classic Fabry disease patients. Although the symptoms of Fabry disease span a spectrum of severity, it is useful to classify patients as having classic or later-onset Fabry disease when discussing the disease and the associated treatable population.

### ***Classic Fabry Disease***

Individuals with classic Fabry disease are in most instances males. They have little or no detectable a-GAL levels and are the most severely affected. These patients first experience disease symptoms in adolescence, including pain and

tingling in the extremities, skin lesions, a decreased ability to sweat and clouded eye lenses. If these patients are not treated, their life expectancy is reduced and death usually occurs in the fourth or fifth decade of life from renal failure, cardiac dysfunction or stroke. Studies reported in the Journal of the American Medical Association (January 1999) and The Metabolic and Molecular Bases of Inherited Disease (8th edition 2001) suggest the annual incidence of Fabry disease in newborn males is 1:40,000-1:60,000. Current estimates from the University of Iowa and the National Kidney Foundation suggest that there are a total of approximately 5,000 classic Fabry disease patients worldwide.



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### ***Later-onset Fabry Disease***

Individuals with later-onset Fabry disease can be male or female. They typically first experience disease symptoms in adulthood, and often have disease symptoms focused on a single organ. For example, many males and females with later-onset Fabry disease have enlargement of the left ventricle of the heart. As the patients advance in age, the cardiac complications of the disease progress and can lead to death. Studies reported in *Circulation* and *Journal of the American Heart Association* (March 2002 and August 2004), estimated that 6-12% of patients between 40 and 60 years of age with an unexplained enlargement of the left ventricle of the heart, a condition referred to as left ventricular hypertrophy, have Fabry disease.

A number of males and females also have later-onset Fabry disease with disease symptoms focused on the kidney that progress to end stage renal failure and eventually death. Studies reported in *Nephrology Dialysis Transplant* (2003), *Clinical and Experimental Nephrology* (2005) and *Nephrology Clinical Practice* (2005) estimate that 0.20% to 0.94% of patients on dialysis have Fabry disease.

In addition, later-onset Fabry disease may also present in the form of strokes of unknown cause. A recent study reported in *The Lancet* (November 2005) found that approximately 4% of 721 male and female patients in Germany between the ages of 18 to 55 with stroke of unknown cause have Fabry disease.

It was previously believed to be rare for female Fabry disease patients to develop overt clinical manifestations of Fabry disease. Fabry disease is known as an X-linked disease because the inherited a-GAL gene mutation is located only on the X chromosome. Females inherit an X chromosome from each parent and therefore can inherit a Fabry mutation from either parent. By contrast, males inherit an X chromosome (and potentially a Fabry mutation) only from their mothers. For this reason, there are expected to be roughly twice as many females as males that have Fabry disease mutations. Several studies reported in the *Journal of Medical Genetics* (2001), the *Internal Medicine Journal* (2002) and the *Journal of Inherited Metabolic Disease* (2001) report that, while the majority of females with Fabry disease mutations have mild symptoms, many have severe symptoms, including enlargement of the left ventricle of the heart and/or renal failure.

In a recent study reported in the *American Journal of Human Genetics*, more than thirty-seven thousand newborn males in Italy were screened for a-GAL activity and mutations. The incidence of Fabry mutations in this study was 1:3100, over ten times higher than previous estimates. This high incidence was attributed to a large number of newborn males with a-GAL mutations often associated with later-onset Fabry disease, which may not have been identified in previous screening studies that relied on diagnosis based on development of symptoms of classic Fabry disease.

### ***Fabry Disease Market Opportunity***

Fabry disease is a relatively rare disorder. The current estimates of approximately 5,000 patients worldwide are generally based on a small number of studies in single ethnic populations in which people were screened for classic Fabry disease. The results of these studies were subsequently extrapolated to the broader world population assuming similar prevalence rates across populations. We believe these previously reported studies did not account for the prevalence of later-onset Fabry disease and, as described above, a number of recent studies suggest that the prevalence of Fabry disease could be many times higher than previously reported.

We expect that as awareness of later-onset Fabry disease grows, the number of patients diagnosed with the disease will increase. Increased awareness of all forms of Fabry disease, particularly for specialists not accustomed to treating Fabry disease patients, may lead to increased testing and diagnosis of patients with the disease. We intend to develop and launch educational and awareness campaigns targeting cardiologists, nephrologists and neurologists regarding Fabry disease and its diagnosis. Assuming we receive regulatory approval, we expect these educational and awareness campaigns would continue as a part of the marketing of Amigal.

Based on published data from the Human Gene Mutation Database and our experience in the field, we believe the majority of the known genetic mutations that cause Fabry disease are missense mutations. There are few widely-occurring genetic mutations reported for Fabry disease, suggesting that the frequency of a specific genetic mutation reported in the Human Gene Mutation Database reflects the approximate frequency of that mutation in the general Fabry patient population. In addition, data presented at the 11th International Conference on Health Problems Related to the Chinese (2002) suggest that the vast majority of newly diagnosed patients with later-onset Fabry

disease also have missense mutations. Because missense mutations often result in less stable, misfolded a-GAL with some residual enzyme activity, we believe patients with these mutations may benefit from treatment with Amigal. We also believe that other types of genetic mutations may result in misfolded a-GAL and therefore may respond to treatment with Amigal. Based on this, we believe that a majority of the Fabry disease patient population may benefit from treatment with Amigal.

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### ***Existing Products for the Treatment of Fabry Disease and Potential Advantages of Amigal***

The current standard of treatment for Fabry disease is enzyme replacement therapy. Currently, two products are approved for the treatment of Fabry disease: Fabrazyme<sup>®</sup> and Replagal<sup>®</sup>. Fabrazyme<sup>®</sup> is approved globally and commercialized by Genzyme Corporation. Fabrazyme<sup>®</sup> was approved in the U.S. in 2003 and in the EU in 2001, and has orphan drug exclusivity in the U.S. until 2010 and in the EU until 2011. Replagal<sup>®</sup> is commercialized by Shire and approved in the EU and other countries but not in the U.S. Replagal<sup>®</sup> was approved in the EU in August 2001 and has orphan drug exclusivity in the EU until 2011. The net product sales of Fabrazyme<sup>®</sup> for 2008 were approximately \$494 million as publicly reported by Genzyme Corporation, while the net product sales for Replagal<sup>®</sup> for the nine months ended September 30, 2008 were approximately \$132 million as publicly reported by Shire.

Prior to the availability of enzyme replacement therapy, treatments for Fabry disease were directed at ameliorating symptoms without treating the underlying disease. Some of these treatments include opiates, anticonvulsants, antipsychotics and antidepressants to control pain and other symptoms, and beta-blockers, calcium channel blockers, ACE inhibitors, angiotensin receptor antagonists and other agents to treat blood pressure and vascular disease.

For Fabry disease patients who respond to Amigal, we believe that the use of Amigal may have advantages relative to the use of Fabrazyme<sup>®</sup> and Replagal<sup>®</sup>. Published data for patients treated with Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> for periods of up to five years demonstrate that these drugs can lead to the reduction of GL-3 in multiple cell types in the skin, heart and kidney. However, because they are large protein molecules, Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> are believed to have difficulty penetrating some tissues and cell types. In particular, it is widely believed that Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> are unable to cross the blood-brain barrier and thus are unlikely to address the neurological symptoms of Fabry disease. As a small molecule therapy that has demonstrated high oral bioavailability and good biodistribution properties in preclinical testing, Amigal has the potential to reach cells of all the target tissues of Fabry disease.

Furthermore, treatment with Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> requires intravenous infusions every other week, frequently on-site at health care facilities, presenting an inconvenience to Fabry patients. Oral treatment with Amigal may be much more convenient for patients and may not have the safety risks associated with intravenous infusions.

In February 2004, Amigal was granted orphan drug designation by the FDA for the treatment of Fabry disease and in March 2006 the EMEA recommended orphan medicinal product designation for Amigal. We believe that orphan drug designation of Fabrazyme<sup>®</sup> in the U.S. and of Fabrazyme<sup>®</sup> and Replagal<sup>®</sup> in the EU will not prevent us from obtaining marketing approval of Amigal in either geography. See Government Regulation.

### **Plicera for Gaucher Disease**

#### ***Overview***

Our second most advanced clinical product candidate, Plicera, is an orally-administered, small molecule, pharmacological chaperone for the treatment of Gaucher disease. In November 2007, we entered into a partnership with Shire to develop Plicera.

We completed Phase 1 clinical trials which demonstrated that Plicera was safe and well tolerated in healthy subjects at all doses tested. We also conducted a 4 week Phase 2 study in Gaucher patients who switched from enzyme replacement therapy with imiglucerase to Plicera. Results showed that Plicera was generally safe and well tolerated at all doses and increased target enzyme activity levels in a majority of patients. In the trial, b-glucocerebrosidase (GCase) activity, as measured in white blood cells, was increased in 20 of the 26 patients with evaluable GCase data, and 5 of the 6 patients without a clear increase were either in the lowest dose cohort or the cohort dosed least frequently. As expected in this short term study, the levels of relevant hematological markers of Gaucher disease remained stable.

We are currently conducting a Phase 2 clinical trial of Plicera in Type I Gaucher patients. This study, GAU-CL-202, involves subjects with Type I Gaucher disease who are naïve to ERT and substrate reduction therapy. The study is designed to evaluate the safety of Plicera and its effect on parameters that are commonly abnormal in Gaucher disease including levels of red blood cells, platelets, liver and spleen volumes and other biomarkers related to Gaucher disease. Patients will be assigned to one of two treatment arms and will receive treatment with Plicera for approximately 6 months. We expect the results to be available in the third quarter of 2009.

#### ***Causes of Gaucher Disease and Rationale for Use of Plicera***

Gaucher disease is a lysosomal storage disorder resulting from a deficiency in the enzyme, GCCase. Signs and symptoms can be severe and debilitating, including an enlarged liver and spleen, abnormally low levels of red blood cells and platelets, and skeletal complications. In some forms of the disease there is also significant impairment of the central nervous system. The deficiency of GCCase in Gaucher patients is caused by inherited genetic mutations. Certain of these mutations cause changes in the amino acid sequence of GCCase that may result in the production of GCCase with reduced stability that does not fold into its correct three-dimensional shape. Although GCCase produced in patient cells often retains the potential for some level of biological activity, the cell's quality control mechanisms recognize and retain misfolded GCCase in the ER until it is ultimately moved to another part of the cell for degradation and elimination. Consequently, little or no GCCase moves to the lysosome, where it normally breaks down its substrate, a complex lipid called glucocerebroside. This leads to accumulation of glucocerebroside in cells, which is believed to result in the clinical manifestations of Gaucher disease. In addition, the accumulation of the misfolded GCCase enzyme in the ER may lead to cellular stress and inflammatory-like responses, which may contribute to cellular dysfunction and disease.

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Plicera is designed to act as a pharmacological chaperone for GCase by selectively binding to the enzyme, which increases the stability of the enzyme and helps it fold into its correct three-dimensional shape. This stabilization of GCase allows the cell's quality control mechanisms to recognize the enzyme as properly folded so that trafficking of the enzyme to the lysosome is increased, enabling it to carry out its intended biological function, the metabolism of glucocerebroside. As a result of restoring proper trafficking of GCase from the ER to lysosomes, Plicera reduces the accumulation of misfolded GCase in the ER, which may alleviate cellular stress and inflammatory-like responses that may be contributing factors in Gaucher disease.

Because Plicera increases the cellular levels of a patient's naturally produced GCase, those Gaucher disease patients with a missense mutation or other genetic mutation that results in production of GCase that is less stable but with some residual enzyme activity are the ones most likely to respond to treatment with Plicera. We estimate that the substantial majority of patients with Gaucher disease may respond to pharmacological chaperone therapy. Patients with genetic mutations leading to a partially made GCase enzyme or GCase enzyme with an irreversible loss of activity are less likely to respond to treatment with Plicera.

### ***Gaucher Disease Background***

Gaucher disease is often described in terms of the following three clinical subtypes:

*Type I Chronic Nonneuronopathic Gaucher Disease.* Type I Gaucher disease is the most common subtype affecting more than 90% of patients and symptoms usually first appear in adulthood. Type I Gaucher disease is characterized by the occurrence of an enlarged spleen and liver, anemia, low platelet counts and fractures and bone pain. Patients with Type I Gaucher disease do not experience the neurological features associated with Types II and III Gaucher disease. The clinical severity of Type I Gaucher disease is extremely variable with some patients experiencing the full range of symptoms, while others are asymptomatic throughout most of their lives.

*Type II Acute Neuronopathic Gaucher Disease.* Type II Gaucher disease symptoms typically appear in infancy with an average age of onset of about three months. Type II Gaucher disease involves rapid neurodegeneration with extensive visceral involvement that usually results in death before two years of age, typically due to respiratory complications. The clinical presentation in Type II Gaucher disease is typically more uniform than Type I Gaucher disease.

*Type III Subacute Neuronopathic Gaucher Disease.* Type III Gaucher disease symptoms typically first appear in infancy or early childhood and involve some neurological symptoms, along with visceral and bone complications. Age of onset and disease severity can vary widely. Disease progression in Type III Gaucher disease is typically slower than in Type II Gaucher disease.

### ***Gaucher Disease Market Opportunity***

Gaucher disease is a relatively rare disorder. According to estimates reported by the American Society of Health-System Pharmacists (August 2003) and the National Institute of Neurological Disorders and Stroke (updated as of January 2006), there are approximately 10,000 patients worldwide. Type I Gaucher disease is, by far, the most common of the subtypes.

Published data, including data from the Human Gene Mutation Database, suggest that the substantial majority of patients with Gaucher disease have a missense mutation in at least one copy of the gene. The majority of the Type I Gaucher patients in the U.S., Europe and Israel have at least one copy of either the N370S or the L444P mutation, both of which are missense mutations. Based on our experience in the field and studies we have completed, including a Gaucher Ex Vivo Response Study, we believe that the substantial majority of individuals with Gaucher disease may benefit from treatment with Plicera. In addition, we believe that Plicera may also benefit some patients with the neuronopathic forms of Gaucher disease (Type II and Type III) because of the ability of the small molecule to cross the blood-brain barrier.

**Table of Contents*****Existing Products for the Treatment of Gaucher Disease and Potential Advantages of Plicera***

The current standard of treatment for Gaucher patients is enzyme replacement therapy, although two products are currently approved for the treatment of Gaucher disease, only one of which is an enzyme replacement therapy. Cerezyme® is an enzyme replacement therapy approved globally and commercialized by Genzyme Corporation. Cerezyme® was approved in the U.S. in 1994 and in the EU in 1997 and no longer has orphan drug exclusivity in the U.S. In both the U.S. and the EU, Cerezyme® is indicated for long-term enzyme replacement therapy for pediatric and adult patients with a confirmed diagnosis of Type I Gaucher disease. In addition, in the EU, it is indicated for Type III Gaucher disease patients who exhibit clinically significant non-neurological manifestations. The second product approved for treatment of Gaucher disease is Zavesca®, a substrate reduction therapy product approved in the U.S., the EU and other countries and commercialized by Actelion, Ltd. Zavesca® was approved in the U.S. in 2003 and in the EU in 2002 and has orphan drug exclusivity in the U.S. until 2010 and in the EU until 2012. It is indicated for adults with mild to moderate Type I Gaucher disease for whom enzyme replacement therapy is not an option. The net product sales of Cerezyme® for the year 2008 were approximately \$1.2 billion as publicly reported by Genzyme Corporation, while the net product sales for Zavesca® for the nine months ended September 30, 2008 were approximately \$29 million as publicly reported by Actelion Ltd.

For Gaucher disease patients who respond to Plicera, we believe that the use of Plicera may have advantages relative to the use of Cerezyme®. Published data demonstrate that treatment with Cerezyme® can lead to the reduction of glucocerebroside in multiple tissue types, especially the liver and spleen, and to increased levels of red blood cells and platelets. However, because it is a large protein molecule, Cerezyme® is believed to have difficulty penetrating some tissues and cell types. In particular, it is widely believed that Cerezyme® is unable to cross the blood-brain barrier and thus unlikely to address the neurological symptoms of Type II and Type III Gaucher disease. In contrast, studies in animals show that Plicera distributes throughout the body. In particular, studies show that Plicera crosses the blood-brain barrier, suggesting that it may provide a clinical benefit to patients with Type II and Type III Gaucher disease. Additionally, treatment with Cerezyme® requires intravenous infusions every other week. Oral treatment with Plicera may be more convenient for patients and may not have the safety risks associated with intravenous infusions. We also believe that Plicera may have advantages over the use of Zavesca®, a substrate reduction therapy. While Zavesca® is an orally-administered small molecule, the underlying mechanism of action is very different than for pharmacological chaperones. Substrate reduction therapies are designed to prevent the production of the substrate that accumulates in disease by inhibiting an enzyme required to make the substrate in cells. This is not the same enzyme that is deficient in Gaucher disease and is needed to make molecules that are used for many types of biological processes. As a result, inhibiting this enzyme may have adverse effects that are difficult to predict. By contrast, Plicera is designed to bind directly to GCCase, increasing its stability and helping it fold into its correct three-dimensional shape. This in turn enables proper trafficking to the lysosome where it can directly decrease substrate accumulation. In addition, several side effects were reported by Actelion, Ltd. in clinical trials of Zavesca®, including diarrhea, which was observed in more than 85% of patients who received the drug, hand tremors and numbness and tingling in the hands, arms, legs or feet. Plicera's mechanism of action is very different from Zavesca®. We expect Plicera to have a therapeutic and side-effect profile defined by our clinical trials. To date, Plicera has been safe and well tolerated in the clinical studies conducted by Amicus without incidents of side-effects similar to those of Zavesca®.

In February 2006, the FDA granted orphan drug designation for the active ingredient in Plicera for the treatment of Gaucher disease in the U.S. We believe that the orphan drug designation of Zavesca® in the U.S. and the EU will not prevent us from obtaining marketing approval of Plicera in either geography. See Government Regulation.

**AT2220 for Pompe Disease*****Overview***

Our third most advanced product candidate, AT2220, is an orally-administered small molecule pharmacological chaperone for the treatment of Pompe disease. In November 2007, we entered into a partnership with Shire to develop AT2220.

We completed three Phase 1 clinical trials of AT2220 for Pompe disease in 2007 and initiated a Phase 2 clinical trial in June 2008 in adult Pompe patients who are naïve to ERT. The trial includes an 11-week treatment period with an optional extension study. The objectives of the trial include the evaluation of the safety and pharmacodynamics of

multiple doses and regimens of AT2220. The results of this study are expected to be available in the second half of 2009.

In addition, we are continuing to conduct preclinical animal studies to evaluate the effects of administering AT2220 in combination with ERT. Encouraging preliminary results were announced at the American Society of Human Genetics conference in November 2008. These results indicated that AT2220 in combination with ERT increases the stability and tissue uptake of ERT. We are conducting additional preclinical proof-of-concept studies to determine the feasibility of a combination that may be appropriate for Pompe patients who are not amenable to chaperone monotherapy. We expect to discuss additional results at relevant scientific conferences during 2009.

The FDA's Office of Orphan Products Development has granted orphan drug designation for the active ingredient in AT2220 in the U.S.

**Table of Contents*****Causes of Pompe Disease and Rationale for Use of AT2220***

Pompe disease is a neuromuscular and lysosomal storage disorder caused by a deficiency in the enzyme  $\alpha$ -glucosidase (GAA). Symptoms can be severe and debilitating, including progressive muscle weakness throughout the body, particularly the heart and skeletal muscles. The deficiency of GAA in Pompe patients is caused by inherited genetic mutations. Certain of these mutations cause changes in the amino acid sequence of GAA that may result in the production of GAA with reduced stability that does not fold into its correct three-dimensional shape. Although GAA produced in patient cells often retains the potential for biological activity, the cell's quality control mechanisms recognize and retain misfolded GAA in the ER, until it is ultimately moved to another part of the cell for degradation and elimination. Certain other mutations cause changes in RNA processing that lead to the production of normal GAA, but at levels that are much lower than in an unaffected individual. In either case, little or no GAA moves to the lysosome, where it normally breaks down its substrate, glycogen. This leads to accumulation of glycogen in cells, which is believed to result in the majority of clinical manifestations of Pompe disease. In addition, the accumulation and mistrafficking of GAA may lead to stress on cells and inflammatory-like responses, which may contribute to cellular dysfunction and disease.

AT2220 is designed to act as a pharmacological chaperone for GAA by selectively binding to GAA and increasing its stability which helps the enzyme fold into its correct three-dimensional shape. We believe this stabilization of GAA allows the cell's quality control mechanisms to recognize the protein as properly folded so that trafficking of the enzyme to the lysosome is increased, enabling it to carry out its intended biological function, the metabolism of glycogen. We believe AT2220 may increase proper trafficking of GAA in patients that produce unstable misfolded GAA, and in patients that produce low levels of normal GAA because some fraction of normal GAA can also fail to pass the cell's quality control system. AT2220 has been shown to increase GAA levels in cell lines derived from Pompe patients, in transfected cells expressing mutant forms of GAA and in healthy mice and monkeys. In addition, as a result of increasing the proper trafficking of unstable misfolded GAA to the lysosome, AT2220 may reduce the accumulation of misfolded GAA in the ER, which may alleviate cellular stress and inflammatory-like responses that may be contributing factors in Pompe disease.

Because AT2220 is believed to increase the activity of a patient's naturally produced GAA, those Pompe disease patients with a mutation that results in production of GAA with some residual enzyme activity are the ones most likely to respond to treatment with AT2220. We therefore estimate that the majority of patients with Pompe disease may respond to pharmacological chaperone therapy. Patients with genetic mutations leading to a partially made GAA enzyme or GAA enzyme with an irreversible loss of activity are less likely to respond to treatment with AT2220.

***Pompe Disease Background***

Pompe disease, also known as glycogen storage disease type II or acid maltase deficiency, is a relatively rare disorder caused by mutations in GAA. The mutations in GAA result in the accumulation of lysosomal glycogen, especially in skeletal, cardiac and smooth muscle tissues. According to reported estimates of the Acid Maltase Deficiency Association, the United Pompe Foundation and the Lysosomal Disease Program at Massachusetts General Hospital, there are 5,000-10,000 patients with Pompe disease worldwide.

Pompe disease ranges from a rapidly fatal infantile form with severe cardiac involvement to a more slowly progressive, later-onset form primarily affecting skeletal muscle. All forms are characterized by severe muscle weakness that worsens over time. In the rapid onset form, patients are usually diagnosed shortly after birth and often experience enlargement of the heart and severe muscle weakness. In later-onset Pompe disease, symptoms may not appear until late childhood or adulthood and patients often experience progressive muscle weakness.

***Pompe Disease Market Opportunity***

Pompe disease is a relatively rare disorder. Most reported estimates project that there are 5,000 to 10,000 patients worldwide, the majority of whom have later-onset Pompe disease.

Based on published data from the Human Gene Mutation Database and our experience in the field, we believe that many of the known genetic mutations that cause Pompe disease are mutations that result in measurable residual enzyme activity. The majority of Pompe patients have either juvenile or adult-onset disease, and both types of patients generally have measurable levels of residual enzyme activity. Because pharmacological chaperone therapy is most likely to benefit patients with some residual enzyme activity, we believe that a majority of the Pompe patient



population may benefit from treatment with AT2220. There are a few mutations reported in Pompe disease that are more common in specific ethnic populations, including a splice-site mutation common in Caucasians with adult-onset disease. Studies published in the Journal of Medical Genetics, Human Mutation, and the Journal of Neurology suggest that over 70% of all Caucasians with adult-onset Pompe disease have at least one copy of this splice-site mutation. Because this splice-site mutation results in the production of normal GAA protein, albeit at a level lower than in a non-affected individual, we believe patients with this mutation may be addressable with pharmacological chaperone therapy.

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### ***Existing Products for the Treatment of Pompe Disease and Potential Advantages of AT2220***

The current standard of treatment for Pompe patients is enzyme replacement therapy. There is currently one product approved for the treatment of Pompe disease, Myozyme<sup>®</sup>, which is approved in the U.S. and the EU and commercialized by Genzyme Corporation. Myozyme<sup>®</sup> was approved in the U.S. and in the EU in 2006 and has orphan drug exclusivity in the U.S. until 2013 and in the EU until 2016. Although Myozyme<sup>®</sup> is approved for use in all Pompe patients, studies currently reported on the label included only patients with infantile-onset disease. Data from a study looking at Myozyme<sup>®</sup> in patients with later-onset disease was reported in late 2007 and is currently under review by various regulatory authorities. This study reportedly achieved the primary endpoint of demonstrating an improvement in motor and pulmonary function. The net product sales of Myozyme<sup>®</sup> for 2008 were approximately \$296 million as publicly reported by Genzyme Corporation.

For Pompe disease patients who respond to AT2220, we believe that the use of AT2220 may have advantages relative to the use of Myozyme<sup>®</sup>. Available data demonstrate that treatment with Myozyme<sup>®</sup> can improve survival in patients with the infantile form of the disease and may slow the decline in motor and pulmonary function in patients with the later onset form of the disease. However, because it is a large protein molecule, Myozyme<sup>®</sup> is believed to have difficulty penetrating many tissues and cell types. Because AT2220 is a small molecule that has demonstrated high oral bioavailability and good biodistribution properties in preclinical testing, it has the potential to reach all cells of the target tissues of Pompe disease patients. Furthermore, treatment with Myozyme<sup>®</sup> requires lengthy intravenous infusions every other week, frequently on site at health care facilities, presenting an inconvenience to Pompe disease patients. The label for Myozyme<sup>®</sup> also indicates that the infusion has safety concerns, with infusion reactions observed in 51% of patients, and severe infusion-related reactions observed in 14% of patients. Oral treatment with AT2220 may be more convenient for patients and may not have the safety risks associated with intravenous infusions. We believe that the orphan drug designation of Myozyme<sup>®</sup> in the U.S. and in the EU will not prevent us from obtaining marketing approval of AT2220 in either geography. See Government Regulation.

### **Other Programs**

We believe that our pharmacological chaperone technology is applicable to the development of drugs for the treatment of a wide range of human genetic and other diseases. We are currently researching the use of pharmacological chaperones for the treatment of diseases other than lysosomal storage disorders, including neurological diseases such as Parkinson's disease. An epidemiological and biochemical link between Gaucher and Parkinson's disease has been established. Furthermore, in 2007, we generated data showing that treatment with Plicera led to reduction in a-synuclein in the brains of animal model for Parkinson's disease and, in 2008, we generated data in rodents demonstrating that brain exposure for Plicera is about 18% of plasma levels.

### **Strategic Alliances and Arrangements**

We intend to form strategic alliances to gain access to the financial, technical, clinical and commercial resources necessary to develop and market pharmacological chaperone therapeutics. We expect these alliances to provide us with financial support in the form of equity investments, research and development funding, license fees, milestone payments and royalties or profit-sharing based on sales of pharmacological chaperone therapeutics. We currently have one strategic alliance with Shire.

On November 7, 2007, we entered into a License and Collaboration Agreement with Shire. Under the agreement, Amicus and Shire will jointly develop Amicus' three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal, Plicera and AT2220. We granted Shire the rights to commercialize these products outside the U.S. We will retain all rights to our other programs and to develop and commercialize Amigal, Plicera and AT2220 in the U.S.

In 2007, we received an initial, non-refundable license fee payment of \$50 million from Shire and joint development costs toward global approval of the three compounds are being shared 50/50 per the collaboration agreement. In addition, we are eligible to receive, for all three drug product candidates, aggregate potential milestone payments of up to \$150 million if certain clinical and regulatory milestones are achieved for all three of the programs, and \$240 million in sales-based milestones for all three of the programs. We will also be eligible to receive tiered double-digit royalties on net sales of the products which are marketed outside of the U.S.

### **Intellectual Property**

***Patents and Trade Secrets***

Our success depends in part on our ability to maintain proprietary protection surrounding our product candidates, technology and know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by filing U.S. and foreign patent applications related to our proprietary technology, including both new inventions and improvements of existing technology, that are important to the development of our business, unless this proprietary position would be better protected using trade secrets. Our patent strategy includes obtaining patent protection, where possible, on compositions of matter, methods of manufacture, methods of use, combination therapies, dosing and administration regimens, formulations, therapeutic monitoring, screening methods and assays. We also rely on trade secrets, know-how, continuing technological innovation, in-licensing and partnership opportunities to develop and maintain our proprietary position. Lastly, we monitor third parties for activities that may infringe our proprietary rights, as well as the progression of third party patent applications that may have the potential to create blocks to our products or otherwise interfere with the development of our business. We are aware, for example, of U.S. patents, and corresponding international counterparts, owned by third parties that contain claims related to treating protein misfolding. If any of these patents were to be asserted against us we do not believe that our proposed products would be found to infringe any valid claim of these patents. There is no assurance that a court would find in our favor or that, if we choose or are required to seek a license, a license to any of these patents would be available to us on acceptable terms or at all.

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We own or license rights to several issued patents in the U.S., current member states of the European Patent Convention and numerous pending foreign applications, which are foreign counterparts of many of our U.S. patents. We also own or license rights to several pending U.S. applications. Our patent portfolio includes patents and patent applications with claims relating to methods of increasing deficient enzyme activity to treat genetic diseases. The patent positions for our three leading product candidates are described below and include both patents and patent applications we own or exclusively license:

We have an exclusive license to five issued U.S. patents and several pending U.S. applications that cover use of Amigal, as well as corresponding foreign applications. U.S. patents relating to Amigal expire in 2018 (not including the Hatch-Waxman statutory extension, which is described below), while the foreign counterpart patents, if granted, would expire in 2019 (not including the Supplemental Protection Certificates or SPC extensions, which are described below). The patents and the pending applications include claims covering methods of increasing the activity of and preventing the degradation of a-GAL, and methods for the treatment of Fabry disease using Amigal and other specific competitive inhibitors of a-GAL. In addition, we own pending U.S. applications directed to specific treatment and monitoring regimens with Amigal as well as to dosing regimens with Amigal, which, if granted, may result in patents that expire in 2028. Further, we have several pending U.S. applications directed to synthetic steps related to the commercial process for preparing Amigal, which may result in patents that expire in 2026. Lastly, we jointly own one pending U.S. application covering methods of diagnosing Fabry disease and determining whether Fabry patients will respond to treatment with Amigal, which, if granted, will expire in 2027. We have filed, or plan to file, foreign counterparts of these applications, where appropriate, by the applicable deadlines.

We have an exclusive license to seven U.S. patents and two pending U.S. applications, and five foreign patents and several pending foreign applications that cover Plicera or its use. Two of the U.S. patents relating to Plicera compositions of matter expire in 2015 and 2016 (not including the Hatch-Waxman statutory extension, which is described below); the five composition of matter foreign patents and one pending foreign application, if granted, expire in 2015 (not including the SPC extensions, which are described below). The other five U.S. patents and two pending applications, which claim methods of increasing the activity of and preventing the degradation of GCCase, and methods for the treatment of Gaucher disease using Plicera and other specific competitive inhibitors of GCCase, expire in 2018. We own a pending U.S. application directed to the particular form of the active agent in Plicera, which, if granted, will expire in 2027. We own one pending U.S. application directed to dosing regimens for Plicera, which if granted, will expire in 2028. We own one pending U.S. application directed to specific treatment and monitoring regimens with Plicera. If granted, this also will expire in 2028. Lastly, we own one pending U.S. application directed to methods of synthesis of Plicera, which if granted, will expire in 2028. We have filed, or plan to file, foreign counterparts of these applications, where appropriate, by the applicable deadlines.

We have an exclusive license to three U.S. patents that cover use of AT2220, two pending U.S. applications, as well as corresponding foreign applications. The U.S. patents relating to AT2220 expire in 2018 (not including the Hatch-Waxman statutory extension, which is described below), while the foreign counterpart patents, if granted, would expire in 2019 (not including the SPC extensions, which are described below). The patents and the pending applications include claims covering methods of increasing the activity of and preventing the degradation of GAA, and methods for the treatment of Pompe disease using AT2220 and other specific competitive inhibitors of GAA.

Our patent estate also includes patent applications we license or own relating to combination compositions or uses for our product candidates or new potential product candidates. Some of these applications are pending in the U.S. and foreign patent offices and include one family of patents licensed from Mt. Sinai School of Medicine. Others have to date only been filed as provisional applications in the U.S. We have filed or expect to file some of these as non-provisional applications in U.S. and in other countries at the appropriate time. These patent applications, assuming they issue as patents, would expire in the U.S. between 2023 and 2028.

Individual patents extend for varying periods depending on the effective date of filing of the patent application or the date of patent issuance, and the legal term of the patents in the countries in which they are obtained. Generally, patents

issued in the U.S. are effective for:

the longer of 17 years from the issue date or 20 years from the earliest effective filing date, if the patent application was filed prior to June 8, 1995; and

20 years from the earliest effective filing date, if the patent application was filed on or after June 8, 1995.

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The term of foreign patents varies in accordance with provisions of applicable local law, but typically is 20 years from the earliest effective filing date.

The U.S. Drug Price Competition and Patent Term Restoration Act of 1984, more commonly known as the Hatch-Waxman Act, provides for an extension of one patent, known as a Hatch-Waxman statutory extension, for each NCE to compensate for a portion of the time spent in clinical development and regulatory review. However, the maximum extension is five years and the extension cannot extend the patent beyond 14 years from New Drug Application (NDA) approval. Similar extensions are available in European countries, known as SPC extensions, Japan and other countries. However, we will not know what, if any, extensions are available until a drug is approved. In addition, in the U.S., under provisions of the Best Pharmaceuticals for Children's Act, we may be entitled to an additional six month period of patent protection Market Exclusivity and Orphan Drug Exclusivity, for completing pediatric clinical studies in response to a FDA issued Pediatric Written Request before said exclusivities expire. The patent positions of companies like ours are generally uncertain and involve complex legal, technical, scientific and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in promptly filing patent applications on new discoveries, and in obtaining effective claims and enforcing those claims once granted. We focus special attention on filing patent applications for formulations and delivery regimens for our products in development to further enhance our patent exclusivity for those products. We seek to protect our proprietary technology and processes, in part, by contracting with our employees, collaborators, scientific advisors and our commercial consultants to ensure that any inventions resulting from the relationship are disclosed promptly, maintained in confidence until a patent application is filed and preferably until publication of the patent application, and assigned to us or subject to a right to obtain a license. We do not know whether any of our own patent applications or those patent applications that are licensed to us will result in the issuance of any patents. Our issued patents and those that may issue in the future, or those licensed to us, may be challenged, narrowed, invalidated or circumvented or be found to be invalid or unenforceable, which could limit our ability to stop competitors from marketing related products and reduce the term of patent protection that we may have for our products. Neither we nor our licensors can be certain that we were the first to invent the inventions claimed in our owned or licensed patents or patent applications. In addition, our competitors may independently develop similar technologies or duplicate any technology developed by us and the rights granted under any issued patents may not provide us with any meaningful competitive advantages against these competitors. Furthermore, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that any related patent may expire prior to or shortly after commencing commercialization, thereby reducing the advantage of the patent to our business and products.

We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our trade secret technology and processes, in part, by entering into confidentiality agreements with commercial partners, collaborators, employees, consultants, scientific advisors and other contractors, and by contracting with our employees and some of our commercial consultants to ensure that any trade secrets resulting from such employment or consulting are owned by us. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be discovered independently by others. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

***License Agreements***

We have acquired rights to develop and commercialize our product candidates through licenses granted by various parties. The following summarizes our material rights and obligations under those licenses:

*Mt. Sinai School of Medicine* We have acquired exclusive worldwide patent rights to develop and commercialize Amigal, Plicera and AT2220 and other pharmacological chaperones for the prevention or treatment of human diseases or clinical conditions by increasing the activity of wild-type and mutant enzymes pursuant to a license agreement with Mt. Sinai School of Medicine (MSSM) of New York

University. In connection with this agreement, we issued 232,266 shares of our common stock to MSSM in April 2002. In October 2006 we issued MSSM an additional 133,333 shares of common stock and made a payment of \$1.0 million in consideration of an expanded field of use under that license. Under this agreement, to date we have paid no upfront or annual license fees and we have no milestone or future payments other than royalties on net sales. However, on October 31, 2008, we amended and restated this license agreement to, among other items, provide us with the sole right to control the prosecution of patent rights under such agreement and to clarify the portion of royalties and milestone payments we receive from Shire that are payable to MSSM. In connection therewith, we agreed to pay MSSM \$2.6 million in connection with the \$50 million upfront payment that we received in November 2007 from Shire, which was already accrued for at year-end 2007, and an additional \$2.6 million for the sole right to and control over the prosecution of patent rights. This agreement expires upon expiration of the last of the licensed patent rights, which will be in 2019 if a foreign patent is granted and 2018 otherwise, or later subject to any patent term extension that may be granted.

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*University of Maryland, Baltimore County* We have acquired exclusive U.S. patent rights to develop and commercialize Plicera for the treatment of Gaucher disease from the University of Maryland, Baltimore County. Under this agreement, to date we have paid aggregate upfront and annual license fees of \$30 thousand. We are required to make a milestone payment upon the demonstration of safety and efficacy of Plicera for the treatment of Gaucher disease in a Phase 2 study, and another payment upon receiving FDA approval for Plicera for the treatment of Gaucher disease. We are also required to pay royalties on net sales. Upon satisfaction of both milestones, we could be required to make up to \$0.2 million in aggregate payments. This agreement expires upon expiration of the last of the licensed patent rights in 2015.

*Novo Nordisk A/S* We have acquired exclusive patent rights to develop and commercialize Plicera for all human indications. Under this agreement, to date we have paid an aggregate of \$0.4 million in license fees. We are also required to make milestone payments based on clinical progress of Plicera, with a payment due after initiation of a Phase 2 clinical trial for Plicera for the treatment of Gaucher disease, and a payment due upon each filing for regulatory approval of Plicera for the treatment of Gaucher disease in any of the U.S., Europe or Japan. An additional payment is due upon approval of Plicera for the treatment of Gaucher disease in the U.S. and a payment is also due upon each approval of Plicera for the treatment of Gaucher disease in either of Europe or Japan. Assuming successful development of Plicera for the treatment of Gaucher disease in the U.S., Europe and Japan, total milestone payments would be \$7.8 million. We are also required to pay royalties on net sales. This license will terminate in 2016.

Under our license agreements, if we owe royalties on net sales for one of our products to more than one of the above licensors, then we have the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, we will owe royalties only to MSSM and will owe no milestone payments. We expect to pay royalties to all three licensors with respect to Plicera.

Our rights with respect to these agreements to develop and commercialize Amigal, Plicera and AT2220 may terminate, in whole or in part, if we fail to meet certain development or commercialization requirements or if we do not meet our obligations to make royalty payments.

### ***Trademarks***

In addition to our patents and trade secrets, we have filed applications to register certain trademarks in the U.S. and/or abroad, including AMICUS, AMICUS THERAPEUTICS (and design), AMIGAL and PLICERA. At present, all of the U.S. trademark applications for these marks, which are based on an intention to use these marks, have been approved by the U.S. Patent and Trademark Office and Notices of Allowances and have been issued. We have also received foreign allowances or issued foreign registrations for certain of these marks. Our ability to obtain and maintain trademark registrations will in certain instances depend on making use of the mark in commerce on or in connection with our products. For the allowed marks for our candidate products, it may be necessary to re-apply for registration if it becomes apparent that we will not use the mark in commerce within the prescribed time period.

### ***Manufacturing***

We continue to rely on contract manufacturers to supply the active pharmaceutical ingredients and gelatin capsules for Amigal, Plicera and AT2220. The active pharmaceutical ingredients for all three products are manufactured under current good manufacturing practices (cGMP), at kilogram scale initiated with commercially available starting materials. The components in the final formulation for each product are commonly used in other encapsulated products and are well characterized ingredients. We have implemented appropriate controls for assuring the quality of both active pharmaceutical ingredients and capsules. Product specifications will be established in concurrence with regulatory bodies at the time of product registration.

### ***Competition***

#### ***Overview***

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technologies, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including commercial pharmaceutical and biotechnology enterprises, academic institutions, government agencies and private and public research institutions. Any product candidates that we successfully



develop and commercialize will compete with both existing and new therapies that may become available in the future.

Many of our competitors may have significantly greater financial resources and expertise associated with research and development, regulatory approvals and marketing approved products. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

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Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient or are less expensive than products that we may develop. In addition, our ability to compete may be affected because in some cases insurers or other third party payors seek to encourage the use of generic products. This may have the effect of making branded products less attractive to buyers.

**Major Competitors**

Our major competitors include pharmaceutical and biotechnology companies in the U.S. and abroad that have approved therapies or therapies in development for lysosomal storage disorders within our core programs. Other competitors are pharmaceutical and biotechnology companies that have approved therapies or therapies in development for genetic diseases for which pharmacological chaperone technology may be applicable. Additionally, we are aware of several early-stage, niche pharmaceutical and biotechnology companies whose core business revolves around protein misfolding; however, we are not aware that any of these companies is currently working to develop products that would directly compete with ours. The key competitive factors affecting the success of our product candidates are likely to be their efficacy, safety, convenience and price.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The following table lists our principal competitors and publicly available information on the status of their product offerings (U.S. dollars in millions):

| <b>Competitor</b>   | <b>Indication</b> | <b>Product</b>         | <b>Class of Product</b>     | <b>Status</b> | <b>2008 Sales<br/>(in<br/>millions)</b> |
|---------------------|-------------------|------------------------|-----------------------------|---------------|---|
| Genzyme Corporation | Fabry disease     | Fabrazyme <sup>®</sup> | Enzyme Replacement Therapy  | Marketed      | \$ 494                                  |
|                     | Gaucher disease   | Cerezyme <sup>®</sup>  | Enzyme Replacement Therapy  | Marketed      | \$ 1,238                                |
|                     | Pompe disease     | Myozyme <sup>®</sup>   | Enzyme Replacement Therapy  | Marketed      | \$ 296                                  |
|                     | Gaucher disease   | Genz-112638            | Substrate Reduction Therapy | Phase 2       | N/A                                     |
| Shire               | Fabry disease     | Replagal <sup>®</sup>  | Enzyme Replacement Therapy  | Marketed      | \$ 132*                                 |
|                     | Gaucher disease   | GA-GCB                 | Enzyme Replacement Therapy  | Phase 3       | N/A                                     |
| Actelion, Ltd.      | Gaucher disease   | Zavesca <sup>®</sup>   | Substrate Reduction Therapy | Marketed      | \$ 29*                                  |

|                          |                 |       |                            |         |     |
|--------------------------|-----------------|-------|----------------------------|---------|-----|
| Protalix Biotherapeutics | Gaucher disease | prGCD | Enzyme Replacement Therapy | Phase 3 | N/A |
|--------------------------|-----------------|-------|----------------------------|---------|-----|

\* Nine Months  
Sales through  
September 30,  
2008

We are aware of other companies that are conducting preclinical development activities for enzyme replacement therapies to treat Gaucher disease and Pompe disease.

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### **Government Regulation**

#### ***FDA Approval Process***

In the U.S., pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications (NDAs), warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Pharmaceutical product development in the U.S. typically involves preclinical laboratory and animal tests, the submission to the FDA of a notice of claimed investigational exemption or an investigational new drug application (IND), which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease. Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information including information about product chemistry, manufacturing and controls and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has not commented on or questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations, good clinical practices (GCP), as well as under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board (IRB), for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses and, if possible, early evidence on effectiveness. Phase 2 usually involves trials in a limited patient population, to determine the effectiveness of the drug for a particular indication or indications, dosage tolerance and optimum dosage, and identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the U.S. The NDA must include the results of all preclinical, clinical and other testing and a compilation of data relating to the product's pharmacology, chemistry,

manufacture, and controls. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee, and the manufacturer and/or sponsor under an approved new drug application are also subject to annual product and establishment user fees. These fees are typically increased annually.

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The FDA has 60 days from its receipt of a NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of new drug applications. Most such applications for non-priority drug products are reviewed within ten months. The review process may be extended by FDA for three additional months to consider certain information or clarification regarding information already provided in the submission. The FDA may also refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After FDA evaluates the NDA and the manufacturing facilities, it issues an approval letter, an approvable letter or a not-approvable letter. Both approvable and not-approvable letters generally outline the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. FDA has committed to reviewing such resubmissions in 2 or 6 months depending on the type of information included.

An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy and may impose other conditions, including labeling restrictions which can materially affect the potential market and profitability of the drug. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

***The Hatch-Waxman Act***

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application (ANDA). An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. ANDA applicants are not required to conduct or submit results of pre-clinical or clinical tests to prove the safety or effectiveness of their drug product, other than the requirement for bioequivalence testing. Drugs approved in this way are commonly referred to as generic equivalents to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. A certification that the new product will not infringe the already approved product's listed patents or that such patents are invalid is called a Paragraph 4 certification. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired.

If the ANDA applicant has provided a Paragraph 4 certification to the FDA, the applicant must also send notice of the Paragraph 4 certification to the NDA and patent holders once the ANDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph 4 certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph 4 certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent,

settlement of the lawsuit or a decision in the infringement case that is favorable to the ANDA applicant.

The ANDA application also will not be approved until any non-patent exclusivity, such as exclusivity for obtaining approval of a new chemical entity, listed in the Orange Book for the referenced product has expired (New Chemical Entity Market Exclusivity). Federal law provides a period of five years following approval of a drug containing no previously approved active ingredients, during which ANDAs for generic versions of those drugs cannot be submitted unless the submission contains a Paragraph 4 challenge to a listed patent, in which case the submission may be made four years following the original product approval. Federal law provides for a period of three years of exclusivity following approval of a listed drug that contains previously approved active ingredients but is approved in a new dosage form, route of administration or combination, or for a new use, the approval of which was required to be supported by new clinical trials conducted by or for the sponsor, during which FDA cannot grant effective approval of an ANDA based on that listed drug for the same new dosage form, route of administration or combination, or new use.

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### ***Other Regulatory Requirements***

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet.

Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, risk minimization action plans and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product. In addition, quality control as well as drug manufacture, packaging, and labeling procedures must continue to conform to current good manufacturing practices, or cGMPs, after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA during which the agency inspects manufacturing facilities to access compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality control to maintain compliance with cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

### ***Orphan Drugs***

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. The first NDA applicant with FDA orphan drug designation for a particular active ingredient to receive FDA approval of the designated drug for the disease indication for which it has such designation, is entitled to a seven-year exclusive marketing period (Orphan Drug Exclusivity) in the U.S. for that product, for that indication. During the seven-year period, the FDA may not finally approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA application user fee.

### ***Pediatric Information***

Under the Pediatric Research Equity Act of 2003 (PREA), NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.

### ***Fast Track Designation***

Under the fast track program, the sponsor of a new drug candidate may request FDA to designate the drug candidate as a fast track drug concurrent with or after the filing of the IND for the drug candidate. FDA must determine if the drug candidate qualifies for fast track designation within 60 days of receipt of the sponsor's request. Once FDA designates a drug as a fast track candidate, it is required to facilitate the development and expedite the review of that drug.



In addition to other benefits such as the ability to use surrogate endpoints and have greater interactions with FDA, FDA may initiate review of sections of a fast track drug's NDA before the application is complete. This rolling review is available if the applicant provides and FDA approves a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, FDA's time period goal for reviewing an application does not begin until the last section of the NDA is submitted. Additionally, the fast track designation may be withdrawn by FDA if FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

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Under FDA policies, a drug candidate is eligible for priority review, or review within a six-month time frame 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 disease. A fast track designated drug candidate would ordinarily meet FDA's criteria for priority review.

***Accelerated Approval***

Under FDA's accelerated approval regulations, FDA may approve a drug for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit. In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a clinical benefit during post-marketing studies, will allow FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by FDA.

***Section 505(b)(2) New Drug Applications***

Most drug products obtain FDA marketing approval pursuant to an NDA or an ANDA. A third alternative is a special type of NDA, commonly referred to as a Section 505(b)(2) NDA, which enables the applicant to rely, in part, on the safety and efficacy data of an existing product, or published literature, in support of its application.

505(b)(2) NDAs often provide an alternate path to FDA approval for new or improved formulations or new uses of previously approved products. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. The applicant may rely upon certain preclinical or clinical studies conducted for an approved product. The FDA may also require companies to perform additional studies or measurements to support the change from the approved product. The FDA may then approve the new product candidate for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) applicant.

To the extent that the Section 505(b)(2) applicant is relying on studies conducted for an already approved product, the applicant is required to certify to the FDA concerning any patents listed for the approved product in the Orange Book to the same extent that an ANDA applicant would. Thus approval of a 505(b)(2) NDA can be stalled until all the listed patents claiming the referenced product have expired, until any non-patent exclusivity, such as exclusivity for obtaining approval of a new chemical entity, listed in the Orange Book for the referenced product has expired, and, in the case of a Paragraph 4 certification and subsequent patent infringement suit, until the earlier of 30 months, settlement of the lawsuit or a decision in the infringement case that is favorable to the Section 505(b)(2) applicant.

***Anti-Kickback, False Claims Laws & The Prescription Drug Marketing Act***

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal fines, civil monetary penalties and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. The majority of states also have statutes or regulations similar to the federal anti-kickback law and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

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### ***Physician Drug Samples***

As part of the sales and marketing process, pharmaceutical companies frequently provide samples of approved drugs to physicians. The Prescription Drug Marketing Act (the PDMA) imposes requirements and limitations upon the provision of drug samples to physicians, as well as prohibits states from licensing distributors of prescription drugs unless the state licensing program meets certain federal guidelines that include minimum standards for storage, handling and record keeping. In addition, the PDMA sets forth civil and criminal penalties for violations.

### ***Regulation Outside the U.S.***

In addition to regulations in the U.S., we will be subject to a variety of regulations in other jurisdictions governing clinical studies and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of countries outside the U.S. before we can commence clinical studies or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval.

To obtain regulatory approval of a drug under EU regulatory systems, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure, which is compulsory for medicines produced by certain biotechnological processes and optional for those which are highly innovative, provides for the grant of a single marketing authorization that is valid for all EU member states. The decentralized procedure provides for approval by one or more other, or concerned, member states of an assessment of an application performed by one member state, known as the reference member state. Under this procedure, an applicant submits an application, or dossier, and related materials including a draft summary of product characteristics, and draft labeling and package leaflet, to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state cannot approve the assessment report and related materials on the grounds of potential serious risk to the public health, the disputed points may eventually be referred to the European Commission, whose decision is binding on all member states.

We have obtained an orphan medicinal product designation in the EU from the EMEA for Amigal for the treatment of Fabry disease and for Plicera for the treatment of Gaucher disease. We anticipate filing for orphan medicinal product designation from the EMEA for AT2220 for the treatment of Pompe disease. The EMEA grants orphan drug designation to promote the development of products that may offer therapeutic benefits for life-threatening or chronically debilitating conditions affecting not more than five in 10,000 people in the EU. In addition, orphan drug designation can be granted if the drug is intended for a life threatening, seriously debilitating or serious and chronic condition in the EU and that without incentives it is unlikely that sales of the drug in the EU would be sufficient to justify developing the drug. Orphan drug designation is only available if there is no other satisfactory method approved in the EU of diagnosing, preventing or treating the condition, or if such a method exists, the proposed orphan drug will be of significant benefit to patients.

Orphan drug designation provides opportunities for free protocol assistance and fee reductions for access to the centralized regulatory procedures before and during the first year after marketing approval, which reductions are not limited to the first year after marketing approval for small and medium enterprises. In addition, if a product which has an orphan drug designation subsequently receives EMEA marketing approval for the indication for which it has such designation, the product is entitled to orphan drug exclusivity, which means the EMEA may not approve any other application to market the same drug for the same indication for a period of ten years. The exclusivity period may be reduced to six years if the designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Competitors may receive marketing approval of different drugs or biologics for the indications for which the orphan product has exclusivity. In order to do so, however, they must demonstrate that the new drugs or biologics provide a significant benefit over the existing orphan product. This demonstration of significant benefit may be done at the time of initial approval or in post-approval studies, depending on the type of marketing authorization granted.

As described in the section entitled *Amigal for Fabry Disease Existing Products for the Treatment of Fabry Disease and Potential Advantages of Amigal*, we believe that the orphan designation of Fabrazyme® and Replagal® in the EU

will not prevent us from obtaining marketing approval of Amigal in the EU for the treatment of Fabry disease because Amigal will provide significant benefits over Fabrazyme<sup>®</sup> and Replagal<sup>®</sup>. Similarly, we believe the orphan drug designation of Zavesca<sup>®</sup> in the EU will not prevent us from obtaining marketing approval of Plicera in the EU for the treatment of Gaucher disease because Plicera will provide significant benefits over Zavesca<sup>®</sup>.

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### **Pharmaceutical Pricing and Reimbursement**

In the U.S. and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of reimbursement from third party payors. Third party payors include government health administrative authorities, managed care providers, private health insurers and other organizations. These third party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare product candidates. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. Our product candidates may not be considered cost-effective. Adequate third party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

In 2003, the U.S. government enacted legislation providing a partial prescription drug benefit for Medicare recipients that began in 2006. Government payment for some of the costs of prescription drugs may increase demand for any products for which we receive marketing approval. However, to obtain payments under this program, we would be required to sell products to Medicare recipients through managed care organizations and other health care delivery systems operating pursuant to this legislation. These organizations would negotiate prices for our products, which are likely to be lower than we might otherwise obtain. Federal, state and local governments in the U.S. continue to consider legislation to limit the growth of healthcare costs, including the cost of prescription drugs. Future legislation could limit payments for pharmaceuticals such as the drug candidates that we are developing.

The marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third party payors fail to provide adequate coverage and reimbursement. In addition, an increasing emphasis on managed care in the U.S. has increased and will continue to increase the pressure on pharmaceutical pricing.

### **Employees**

As of December 31, 2008, we had 115 full-time employees, 79 of whom were primarily engaged in research and development activities and 36 of whom provide administrative services. A total of 34 employees have an M.D. or Ph.D. degree. None of our employees are represented by a labor union. We have not experienced any work stoppages and consider our employee relations to be good.

### **Our Corporate Information**

We were incorporated under the laws of the State of Delaware on February 4, 2002. Our principal executive offices are located at 6 Cedar Brook Drive, Cranbury, NJ 08512 and our telephone number is (609) 662-2000. Our website address is [www.amicustherapeutics.com](http://www.amicustherapeutics.com). We make available free of charge on our website our annual, quarterly and current reports, including amendments to such reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the U.S. Securities and Exchange Commission.

Information relating to corporate governance at Amicus Therapeutics, including our Code of Business Conduct for Employees, Executive Officers and Directors, Corporate Governance Guidelines, and information concerning our senior management team, Board of Directors, including Board Committees and Committee charters, and transactions in our securities by directors and executive officers, is available on our website at [www.amicustherapeutics.com](http://www.amicustherapeutics.com) under the Investors Corporate Governance caption and in print to any stockholder upon request. Any waivers to the Codes by directors or executive officers and any material amendment to the Code of Business Conduct and Ethics for Employees, Executive Officers and Directors will be posted promptly on our website.

We have filed applications to register certain trademarks in the U.S. and abroad, including AMICUS, AMICUS THERAPEUTICS and design, AMIGAL and PLICERA. We plan to seek FDA approval of the trademarks Amigal and Plicera for migalastat hydrochloride and isofagomine tartrate, respectively. Fabrazyme®, Cerezyme®, Myozyme®, Replagal® and Zavesca® are the property of their respective owners.

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**Item 1A. RISK FACTORS.**

*The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects. In that case, the trading price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to the Company; or risks that the Company currently considers immaterial, may also impair the Company's operations.*

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

**We have incurred significant operating losses since our inception. We currently do not, and since inception never have had, any products available for commercial sale. We expect to incur operating losses for the foreseeable future and may never achieve or maintain profitability.**

Since inception, we have incurred significant operating losses. Our net loss attributable to common stockholders was \$39.4 million, \$41.5 million and \$65.9 million for the years ended 2008, 2007 and 2006 respectively. As of December 31, 2008, we had an accumulated deficit of \$164.2 million. To date, we have financed our operations primarily through private placements of our redeemable convertible preferred stock, proceeds from our initial public offering and from our collaboration agreement with Shire. We have devoted substantially all of our efforts to research and development, including our preclinical development activities and clinical trials. We have not completed development of any drugs. We expect to continue to incur significant and increasing operating losses for at least the next several years and we are unable to predict the extent of any future losses. We anticipate that our expenses will increase substantially as we:

- continue our ongoing Phase 2 extension study of Amigal (migalastat hydrochloride) for the treatment of Fabry disease and initiate a Phase 3 clinical trial of Amigal;

- continue our ongoing Phase 2 clinical trials of Plicera (isofagomine tartrate) for the treatment of Gaucher disease and potentially conduct additional Phase 2 and later-stage clinical trials of Plicera;

- continue our ongoing Phase 2 clinical trial of AT2220 for the treatment of Pompe disease and potentially conduct later-stage clinical trials of AT2220;

- continue our preclinical studies on the combination use of pharmacological chaperones and enzyme replacement therapy in Pompe disease;

- continue the research and development of additional product candidates;

- seek regulatory approvals for our product candidates that successfully complete clinical trials;

- establish a sales and marketing infrastructure to commercialize products for which we may obtain regulatory approval; and

- add operational, financial and management information systems and personnel, including personnel to support our product development efforts and our obligations as a public company.

To become and remain profitable, we must succeed in developing and commercializing drugs with significant market potential. This will require us to be successful in a range of challenging activities, including the discovery of product candidates, successful completion of preclinical testing and clinical trials of our product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling those products for which we may obtain regulatory approval. We are only in the preliminary stages of these activities. We may never succeed in these activities and may never generate revenues that are large enough to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become or remain profitable could depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations.

**We will need substantial funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.**

We expect our research and development expenses to increase in connection with our ongoing activities, particularly as we initiate a Phase 3 clinical trial of Amigal, continue our Phase 2 clinical trials of Plicera and AT2220, and for any later-stage clinical trials of our product candidates. In addition, subject to obtaining regulatory approval of any of our product candidates, we expect to incur significant commercialization expenses for product sales and marketing, securing commercial quantities of product from our manufacturers and product distribution. We currently have no additional commitments or arrangements for any additional financing to fund the research and development and commercial launch of our product candidates other than our collaboration agreement with Shire.

We believe that the net proceeds from our initial public offering, together with our existing cash and cash equivalents and marketable securities, and reimbursements of development costs, excluding potential milestone payments, from Shire will be sufficient to enable us to fund our operating expenses and capital expenditure requirements until at least early 2011. Capital may not be available when needed on terms that are acceptable to us, or at all, especially in light of the current challenging economic environment. If adequate funds are not available to us on a timely basis, we may be required to reduce or eliminate research development programs or commercial efforts.



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Our future capital requirements will depend on many factors, including:

the progress and results of our clinical trials of Amigal, Plicera and AT2220;

the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates;

our achievement of milestone payments under our collaboration agreement with Shire;

the costs, timing and outcome of regulatory review of our product candidates;

the number and development requirements of other product candidates that we pursue;

the costs of commercialization activities, including product marketing, sales and distribution;

the emergence of competing technologies and other adverse market developments;

the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;

the extent to which we acquire or invest in businesses, products and technologies; and

our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

### **Any capital that we obtain may not be on terms favorable to us or our stockholders or may require us to relinquish valuable rights.**

Until such time, if ever, as we generate product revenue to finance our operations, we expect to finance our cash needs through public or private equity offerings and debt financings, corporate collaboration and licensing arrangements and grants from patient advocacy groups, foundations and government agencies. If we are able to raise capital by issuing equity securities, our stockholders will experience dilution. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may include rights that are senior to the holders of our common stock. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, which are not favorable to us or our stockholders. If we raise capital through additional collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us or our stockholders.

### **Our short operating history may make it difficult to evaluate the success of our business to date and to assess our future viability.**

We are a development stage company. We commenced operations in February 2002. Our operations to date have been limited to organizing and staffing our company, acquiring and developing our technology and undertaking preclinical studies and limited clinical trials of our most advanced product candidates. We have not yet generated any commercial sales for any of our product candidates. We have not yet demonstrated our ability to successfully complete large-scale, clinical trials, obtain regulatory approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. If we are successful in obtaining marketing approval for any of our lead product candidates, we will need to transition from a company with a research focus to a company capable of supporting

commercial activities. We may not be successful in such a transition.

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**Risks Related to the Development and Commercialization of Our Product Candidates**

**We depend heavily on the success of our most advanced product candidates, Amigal, Plicera and AT2220. All of our product candidates are still in either preclinical or clinical development. Clinical trials of our product candidates may not be successful. If we are unable to commercialize Amigal, Plicera or AT2220, or experience significant delays in doing so, our business will be materially harmed.**

We have invested a significant portion of our efforts and financial resources in the development of our most advanced product candidates, Amigal, Plicera and AT2220. Our ability to generate product revenue, which we do not expect will occur for at least the next several years, if ever, will depend heavily on the successful development and commercialization of these product candidates. The successful commercialization of our product candidates will depend on several factors, including the following:

obtaining supplies of Amigal, Plicera and AT2220 for completion of our clinical trials on a timely basis;

successful enrollment of patients in our clinical trials on a timely basis;

successful completion of preclinical studies and clinical trials;

obtaining regulatory agreement in the structure and design of our Phase 3 clinical programs;

obtaining marketing approvals from the United States Food and Drug Administration (FDA), and similar regulatory authorities outside the U.S.;

establishing commercial-scale manufacturing arrangements with third party manufacturers whose manufacturing facilities are operated in compliance with current good manufacturing practice (cGMP) regulations;

launching commercial sales of the product, whether alone or in collaboration with others;

acceptance of the product by patients, the medical community and third party payors;

competition from other companies and their therapies;

successful protection of our intellectual property rights from competing products in the U.S. and abroad; and

a continued acceptable safety and efficacy profile of our product candidates following approval.

**If the market opportunities for our product candidates are smaller than we believe they are, then our revenues may be adversely affected and our business may suffer.**

Each of the diseases that our product candidates are being developed to address is relatively rare. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on estimates.

Currently, most reported estimates of the prevalence of these diseases are based on studies of small subsets of the population of specific geographic areas, which are then extrapolated to estimate the prevalence of the diseases in the broader world population. In addition, as new studies are performed the estimated prevalence of these diseases may change. In fact, as a result of some recent studies, we believe that previously reported studies do not accurately account for the prevalence of Fabry disease and that the prevalence of Fabry disease could be many times higher than previously reported. There can be no assurance that the prevalence of Fabry disease, Gaucher disease or Pompe disease in the study populations, particularly in these newer studies, accurately reflects the prevalence of these diseases in the broader world population.

We estimate the number of potential patients in the broader world population who have those diseases and may respond to treatment with our product candidates by further extrapolating estimates of the prevalence of specific types

of genetic mutations giving rise to these diseases. For example, we base our estimate of the percentage of Fabry patients who may respond to treatment with Amigal on the frequency of missense and other similar mutations that cause Fabry disease reported in the Human Gene Mutation Database. As a result of recent studies that estimate that the prevalence of Fabry disease could be many times higher than previously reported, we believe that the number of patients diagnosed with Fabry disease will increase and estimate that the number of Fabry patients who may benefit from the use of Amigal is significantly higher than some previously reported estimates of Fabry disease generally. If our estimates of the prevalence of Fabry disease, Gaucher disease or Pompe disease or of the number of patients who may benefit from treatment with our product candidates prove to be incorrect, the market opportunities for our product candidates may be smaller than we believe they are, our prospects for generating revenue may be adversely affected and our business may suffer.

**Initial results from a clinical trial do not ensure that the trial will be successful and success in early stage clinical trials does not ensure success in later-stage clinical trials.**

We will only obtain regulatory approval to commercialize a product candidate if we can demonstrate to the satisfaction of the FDA or the applicable non-U.S. regulatory authority, in well-designed and conducted clinical trials, that the product candidate is safe and effective and otherwise meets the appropriate standards required for approval for a particular indication. Clinical trials are lengthy, complex and extremely expensive processes with uncertain results. A failure of one or more of our clinical trials may occur at any stage of testing. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. Our efforts to develop all of our product candidates are at an early stage. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and initial results from a clinical trial do not necessarily predict final results. We cannot be assured that these trials will ultimately be successful.

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Patients may not be compliant with their dosing regimen or trial protocols or they may withdraw from the study at any time for any reason. We note that a patient who started dosing in March 2006 in the Phase 2 clinical trials for Amigal for the treatment of Fabry disease elected to withdraw from the study shortly after initial dosing. This patient had a history of hypertension and discontinued study treatment due to increased blood pressure, which was reported by the investigator as possibly related to the study drug.

Even if our early stage clinical trials are successful, we will need to conduct additional clinical trials with larger numbers of patients receiving the drug for longer periods for all of our product candidates before we are able to seek approvals to market and sell these product candidates from the FDA and regulatory authorities outside the U.S. In addition, each of our product candidates is based on our pharmacological chaperone technology. To date, we are not aware that any product based on chaperone technology has been approved by the FDA. As a result, we cannot be sure what endpoints the FDA will require us to measure in later-stage clinical trials of our product candidates. We are aware that the currently available enzyme replacement therapy for the treatment of Fabry disease was approved by the FDA based on an endpoint measuring GL-3 levels in a specific type of kidney cell. We cannot be certain that the FDA will permit the use of this endpoint in our Phase 3 trials of Amigal. If the FDA requires different endpoints than the endpoints we anticipate using, it may be more difficult for us to obtain, or we may be delayed in obtaining, FDA approval of our product candidates. If we are not successful in commercializing any of our lead product candidates, or are significantly delayed in doing so, our business will be materially harmed.

### **We have limited experience in conducting and managing the preclinical development activities and clinical trials necessary to obtain regulatory approvals, including approval by the FDA.**

We have limited experience in conducting and managing the preclinical development activities and clinical trials necessary to obtain regulatory approvals, including approval by the FDA. To date, we have only three lead product candidates: Amigal, Plicera and AT2220. We have not obtained regulatory approval nor commercialized any of these or any other product candidates. We have completed Phase 2 clinical trials for Amigal and are currently conducting Phase 2 clinical trials for Plicera and AT2220 but have not yet initiated a Phase 3 clinical trial for any of our product candidates. Additionally, we are conducting preclinical studies on the combination use of pharmacological chaperones and enzyme replacement therapy in Pompe disease. Our limited experience might prevent us from successfully designing or implementing a clinical trial. We have limited experience in conducting and managing the application process necessary to obtain regulatory approvals and we might not be able to demonstrate that our product candidates meet the appropriate standards for regulatory approval. If we are not successful in conducting and managing our preclinical development activities or clinical trials or obtaining regulatory approvals, we might not be able to commercialize our lead product candidates, or might be significantly delayed in doing so, which will materially harm our business.

### **We may find it difficult to enroll patients in our clinical trials.**

Each of the diseases that our lead product candidates are intended to treat is relatively rare and we expect only a subset of the patients with these diseases to be eligible for our clinical trials. Given that each of our product candidates is in the early stages of required testing, we may not be able to initiate or continue clinical trials for each or all of our product candidates if we are unable to locate a sufficient number of eligible patients to participate in the clinical trials required by the FDA or other non-U.S. regulatory agencies. The requirements of our clinical testing mandate that a patient cannot be involved in another clinical trial for the same indication. We are aware that our competitors have ongoing clinical trials for products that are competitive with our product candidates and patients who would otherwise be eligible for our clinical trials may be involved in such testing, rendering them unavailable for testing of our product candidates. Additionally, many patients with Fabry disease, Gaucher disease and Pompe disease may already be receiving existing therapies, such as enzyme replacement therapy, which would render them ineligible for our current clinical trials if they are not willing to stop receiving such therapies. Further, if we are required to include patients in our clinical trials who have never received enzyme replacement therapy, we may experience yet further difficulty and delay enrolling patients in our trials. Our inability to enroll a sufficient number of patients for any of our current or future clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether.

**If our preclinical studies do not produce positive results, if our clinical trials are delayed or if serious side effects are identified during drug development, we may experience delays, incur additional costs and ultimately be unable to commercialize our product candidates.**

Before obtaining regulatory approval for the sale of our product candidates, we must conduct, at our own expense, extensive preclinical tests to demonstrate the safety of our product candidates in animals, and clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Preclinical and clinical testing is expensive, difficult to design and implement and can take many years to complete. A failure of one or more of our preclinical studies or clinical trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent our ability to obtain regulatory approval or commercialize our product candidates, including:

- our preclinical tests or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials or we may abandon projects that we expect to be promising;

- regulators or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;

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conditions imposed on us by the FDA or any non-U.S. regulatory authority regarding the scope or design of our clinical trials or may require us to resubmit our clinical trial protocols to institutional review boards for re-inspection due to changes in the regulatory environment;

the number of patients required for our clinical trials may be larger than we anticipate or participants may drop out of our clinical trials at a higher rate than we anticipate;

our third party contractors or clinical investigators may fail to comply with regulatory requirements or fail to meet their contractual obligations to us in a timely manner;

we might have to suspend or terminate one or more of our clinical trials if we, the regulators or the institutional review boards determine that the participants are being exposed to unacceptable health risks;

regulators or institutional review boards may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements;

the cost of our clinical trials may be greater than we anticipate;

the supply or quality of our product candidates or other materials necessary to conduct our clinical trials may be insufficient or inadequate or we may not be able to reach agreements on acceptable terms with prospective clinical research organizations; and

the effects of our product candidates may not be the desired effects or may include undesirable side effects or the product candidates may have other unexpected characteristics.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete our clinical trials or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

be delayed in obtaining, or may not be able to obtain, marketing approval for one or more of our product candidates;

obtain approval for indications that are not as broad as intended or entirely different than those indications for which we sought approval; or

have the product removed from the market after obtaining marketing approval.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any preclinical tests or clinical trials will be initiated as planned, will need to be restructured or will be completed on schedule, if at all. Significant preclinical or clinical trial delays also could shorten the patent protection period during which we may have the exclusive right to commercialize our product candidates. Such delays could allow our competitors to bring products to market before we do and impair our ability to commercialize our products or product candidates.

**The commercial success of any product candidates that we may develop, including Amigal, Plicera and AT2220, will depend upon the degree of market acceptance by physicians, patients, third party payors and others in the medical community.**

Any products that we bring to the market, including Amigal, Plicera and AT2220, if they receive marketing approval, may not gain market acceptance by physicians, patients, third party payors and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling;

the efficacy and potential advantages over alternative treatments;

the pricing of our product candidates;

relative convenience and ease of administration;

the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;

the strength of marketing and distribution support and timing of market introduction of competitive products;

publicity concerning our products or competing products and treatments; and

sufficient third party insurance coverage or reimbursement.

Even if a potential product displays a favorable efficacy and safety profile in preclinical and clinical trials, market acceptance of the product will not be known until after it is launched. Our efforts to educate the medical community and third party payors on the benefits of our product candidates may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by the conventional technologies marketed by our competitors.



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**If we are unable to obtain adequate reimbursement from governments or third party payors for any products that we may develop or if we are unable to obtain acceptable prices for those products, our prospects for generating revenue and achieving profitability will suffer.**

Our prospects for generating revenue and achieving profitability will depend heavily upon the availability of adequate reimbursement for the use of our approved product candidates from governmental and other third party payors, both in the U.S. and in other markets. Reimbursement by a third party payor may depend upon a number of factors, including the third party payor's determination that use of a product is:

a covered benefit under its health plan;

safe, effective and medically necessary;

appropriate for the specific patient;

cost-effective; and

neither experimental nor investigational.

Obtaining reimbursement approval for a product from each government or other third party payor is a time consuming and costly process that could require us to provide supporting scientific, clinical and cost effectiveness data for the use of our products to each payor. We may not be able to provide data sufficient to gain acceptance with respect to reimbursement or we might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payor's satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Even when a payor determines that a product is eligible for reimbursement, the payor may impose coverage limitations that preclude payment for some uses that are approved by the FDA or non-U.S. regulatory authorities. In addition, there is a risk that full reimbursement may not be available for high priced products. Moreover, eligibility for coverage does not imply that any product will be reimbursed in all cases or at a rate that allows us to make a profit or even cover our costs. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent.

A primary trend in the U.S. healthcare industry and elsewhere is toward cost containment. We expect recent changes in the Medicare program and increasing emphasis on managed care to continue to put pressure on pharmaceutical product pricing. For example, the Medicare Prescription Drug Improvement and Modernization Act of 2003 provides a new Medicare prescription drug benefit that began in 2006 and mandates other reforms. While we cannot predict the full outcome of the implementation of this legislation, it is possible that the new Medicare prescription drug benefit, which will be managed by private health insurers and other managed care organizations, will result in additional government reimbursement for prescription drugs, which may make some prescription drugs more affordable but may further exacerbate industry wide pressure to reduce prescription drug prices. If one or more of our product candidates reaches commercialization, such changes may have a significant impact on our ability to set a price we believe is fair for our products and may affect our ability to generate revenue and achieve or maintain profitability.

**Governments outside the U.S. tend to impose strict price controls and reimbursement approval policies, which may adversely affect our prospects for generating revenue.**

In some countries, particularly European Union (EU) countries, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time (6 to 12 months or longer) after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our prospects for generating revenue, if any, could be adversely affected and our business may suffer.

**If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate product revenue.**

At present, we have no sales or marketing personnel. In order to commercialize any of our product candidates, we must either acquire or internally develop sales, marketing and distribution capabilities, or enter into collaborations with partners to perform these services for us. We may not be able to establish sales and distribution partnerships on acceptable terms or at all, and if we do enter into a distribution arrangement, our success will be dependent upon the performance of our partner.

In the event that we attempt to acquire or develop our own in-house sales, marketing and distribution capabilities, factors that may inhibit our efforts to commercialize our products without strategic partners or licensees include:

our inability to recruit and retain adequate numbers of effective sales and marketing personnel;

the inability of sales personnel to obtain access to or persuade adequate numbers of physicians to prescribe our products;

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the lack of complementary products to be offered by our sales personnel, which may put us at a competitive disadvantage against companies with broader product lines;

unforeseen costs associated with creating our own sales and marketing team or with entering into a partnering agreement with an independent sales and marketing organization; and

efforts by our competitors to commercialize products at or about the time when our product candidates would be coming to market.

We may co-promote our product candidates in various markets with pharmaceutical and biotechnology companies in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. If we do enter into arrangements with third parties to perform sales and marketing services, our product revenues will be lower than if we directly sold and marketed our products and any revenues received under such arrangements will depend on the skills and efforts of others.

We may not be successful in entering into distribution arrangements and marketing alliances with third parties. Our failure to enter into these arrangements on favorable terms could delay or impair our ability to commercialize our product candidates and could increase our costs of commercialization. Dependence on distribution arrangements and marketing alliances to commercialize our product candidates will subject us to a number of risks, including:

we may not be able to control the amount and timing of resources that our distributors may devote to the commercialization of our product candidates;

our distributors may experience financial difficulties;

business combinations or significant changes in a distributor's business strategy may also adversely affect a distributor's willingness or ability to complete its obligations under any arrangement; and

these arrangements are often terminated or allowed to expire, which could interrupt the marketing and sales of a product and decrease our revenue.

If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue and may not become profitable.

**Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.**

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop and which are approved for sale. We may be exposed to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, such products, whether or not such problems directly relate to the products and services we have provided. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

decreased demand for any product candidates or products that we may develop;

damage to our reputation;

regulatory investigations that could require costly recalls or product modifications;

withdrawal of clinical trial participants;

costs to defend the related litigation;

substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future;

loss of revenue;

the diversion of management's attention from managing our business; and

the inability to commercialize any products that we may develop.

We have liability insurance policies for our clinical trials in the geographies in which we are conducting trials. The amount of insurance that we currently hold may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost and we may not be able to obtain insurance coverage that will be adequate to satisfy any liability that may arise. On occasion, large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or a series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our available cash and adversely affect our business.

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### **We face substantial competition which may result in others discovering, developing or commercializing products before or more successfully than we do.**

The development and commercialization of new drugs is highly competitive and competition is expected to increase. We face competition with respect to our current product candidates and any products we may seek to develop or commercialize in the future from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. For example, several large pharmaceutical and biotechnology companies currently market and sell products for the treatment of Fabry disease. These products include Genzyme Corporation's Fabrazyme<sup>®</sup> and Shire plc's Replagal<sup>®</sup>. In addition, Genzyme Corporation and Actelion, Ltd. market and sell Cerezyme<sup>®</sup> and Zavesca<sup>®</sup>, respectively, for the treatment of Gaucher disease, and Genzyme Corporation markets and sells Myozyme<sup>®</sup> for the treatment of Pompe disease. We are also aware of other enzyme replacement and substrate reduction therapies in development by third parties.

Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or noncompetitive. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. We may also face competition from off-label use of other approved therapies. There can be no assurance that developments by others that will not render our product candidates obsolete or noncompetitive either during the research phase or once the products reach commercialization.

We believe that many competitors, including academic institutions, government agencies, public and private research organizations, large pharmaceutical companies and smaller more focused companies, are attempting to develop therapies for many of our target indications.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, prosecuting intellectual property rights and marketing approved products than we do. Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to or necessary for our programs or advantageous to our business. In addition, if we obtain regulatory approvals for our products, manufacturing efficiency and marketing capabilities are likely to be significant competitive factors. We currently have no commercial manufacturing capability, sales force or marketing infrastructure. Further, many of our competitors have substantial resources and expertise in conducting collaborative arrangements, sourcing in-licensing arrangements and acquiring new business lines or businesses that are greater than our own.

### **Our business activities involve the use of hazardous materials, which require compliance with environmental and occupational safety laws regulating the use of such materials. If we violate these laws, we could be subject to significant fines, liabilities or other adverse consequences.**

Our research and development programs involve the controlled use of hazardous materials, including microbial agents, corrosive, explosive and flammable chemicals and other hazardous compounds in addition to certain biological hazardous waste. Ultimately, the activities of our third party product manufacturers when a product candidate reaches commercialization will also require the use of hazardous materials. Accordingly, we are subject to federal, state and local laws governing the use, handling and disposal of these materials. Although we believe that our safety procedures for handling and disposing of these materials comply in all material respects with the standards prescribed by local, state and federal regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In addition, our collaborators may not comply with these laws. In the event of an accident or failure to comply with environmental laws, we could be held liable for damages that result, and any such liability could exceed our assets and resources or we could be subject to limitations or stoppages related to our use of these materials which may lead to an interruption of our business operations or those of our third party contractors. While we believe that our existing insurance coverage is generally adequate for our normal handling of these

hazardous materials, it may not be sufficient to cover pollution conditions or other extraordinary or unanticipated events. Furthermore, an accident could damage or force us to shut down our operations. Changes in environmental laws may impose costly compliance requirements on us or otherwise subject us to future liabilities and additional laws relating to the management, handling, generation, manufacture, transportation, storage, use and disposal of materials used in or generated by the manufacture of our products or related to our clinical trials. In addition, we cannot predict the effect that these potential requirements may have on us, our suppliers and contractors or our customers.

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**Risks Related to Our Dependence on Third Parties**

**Use of third parties to manufacture our product candidates may increase the risk that we will not have sufficient quantities of our product candidates or such quantities at an acceptable cost, and clinical development and commercialization of our product candidates could be delayed, prevented or impaired.**

We do not own or operate manufacturing facilities for clinical or commercial production of our product candidates. We have limited personnel with experience in drug manufacturing and we lack the resources and the capabilities to manufacture any of our product candidates on a clinical or commercial scale. We currently outsource all manufacturing and packaging of our preclinical and clinical product candidates and products to third parties. 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. These problems include difficulties with production costs and yields and quality control, including stability of the product candidate. We do not currently have any agreements with third party manufacturers for the long-term commercial supply of any of our product candidates. We may be unable to enter into agreements for commercial supply with third party manufacturers, or may be unable to do so on acceptable terms. Even if we enter into these agreements, the manufacturers of each product candidate will be single source suppliers to us for a significant period of time. Reliance on third party manufacturers entails risks, to which we would not be subject if we manufactured product candidates or products ourselves, including:

reliance on the third party for regulatory compliance and quality assurance;

limitations on supply availability resulting from capacity and scheduling constraints of the third parties;

impact on our reputation in the marketplace if manufacturers of our products, once commercialized, fail to meet the demands of our customers;

the possible breach of the manufacturing agreement by the third party because of factors beyond our control; and

the possible termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

The failure of any of our contract manufacturers to maintain high manufacturing standards could result in injury or death of clinical trial participants or patients using products. Such failure could also result in product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns or other problems that could seriously harm our business or profitability.

Our contract manufacturers will be required to adhere to FDA regulations setting forth cGMP. These regulations cover all aspects of the manufacturing, testing, quality control and recordkeeping relating to our product candidates and any products that we may commercialize. Our manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the U.S. Our manufacturers are subject to unannounced inspections by the FDA, state regulators and similar regulators outside the U.S. Our failure, or the failure of our third party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect regulatory approval and supplies of our product candidates.

Our product candidates and any products that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that are both capable of manufacturing for us and willing to do so. If the third parties that we engage to manufacture products for our preclinical tests and clinical trials should cease to continue to do so for any reason, we likely would experience delays in advancing these trials while we identify and qualify replacement suppliers and we

may be unable to obtain replacement supplies on terms that are favorable to us. Later relocation to another manufacturer will also require notification, review and other regulatory approvals from the FDA and other regulators and will subject our production to further cost and instability in the availability of our product candidates. In addition, if we are not able to obtain adequate supplies of our product candidates or the drug substances used to manufacture them, it will be more difficult for us to develop our product candidates and compete effectively.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop product candidates and commercialize any products that obtain regulatory approval on a timely and competitive basis.



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**Materials necessary to manufacture our product candidates may not be available on commercially reasonable terms, or at all, which may delay the development and commercialization of our product candidates.**

We rely on the manufacturers of our product candidates to purchase from third party suppliers the materials necessary to produce the compounds for our preclinical and clinical studies and will rely on these other manufacturers for commercial distribution if we obtain marketing approval for any of our product candidates. Suppliers may not sell these materials to our manufacturers at the time we need them or on commercially reasonable terms and all such prices are susceptible to fluctuations in price and availability due to transportation costs, government regulations, price controls and changes in economic climate or other foreseen circumstances. We do not have any control over the process or timing of the acquisition of these materials by our manufacturers. Moreover, we currently do not have any agreements for the commercial production of these materials. If our manufacturers are unable to obtain these materials for our preclinical and clinical studies, product testing and potential regulatory approval of our product candidates would be delayed, significantly impacting our ability to develop our product candidates. If our manufacturers or we are unable to purchase these materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would materially affect our ability to generate revenues from the sale of our product candidates.

**We rely on third parties to conduct certain preclinical development activities and our clinical trials and those third parties may not perform satisfactorily, including failing to meet established deadlines for the completion of such activities and trials.**

We do not independently conduct certain preclinical development activities of our product candidates, such as long-term safety studies in animals, or clinical trials for our product candidates. We rely on, or work in conjunction with, third parties, such as contract research organizations, medical institutions and clinical investigators, to perform this function. Our reliance on these third parties for preclinical and clinical development activities reduces our control over these activities. We are responsible for ensuring that each of our preclinical development activities and our clinical trials is conducted in accordance with the applicable general investigational plan and protocols, however, we have no direct control over these researchers or contractors (except by contract), as they are not our employees. Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices for conducting, recording and reporting the results of our preclinical development activities and our clinical trials to assure that data and reported results are credible and accurate and that the rights, safety and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our preclinical development activities or our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, regulatory approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates. Moreover, these third parties may be bought by other entities or they may go out of business, thereby preventing them from meeting their contractual obligations.

We also rely on other third parties to store and distribute drug supplies for our preclinical development activities and our clinical trials. Any performance failure on the part of our existing or future distributors could delay clinical development or regulatory approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

Extensions, delays, suspensions or terminations of our preclinical development activities and our clinical trials as a result of the performance of our independent clinical investigators and contract research organizations will delay, and make more costly, regulatory approval for any product candidates that we may develop. Any change in a contract research organization during an ongoing preclinical development activity or clinical trial could seriously delay that trial and potentially compromise the results of the activity or trial.

**We may not be successful in maintaining or establishing collaborations, which could adversely affect our ability to develop and, particularly in international markets, commercialize products.**

For each of our product candidates, we are collaborating with physicians, patient advocacy groups, foundations and government agencies in order to assist with the development of our products. We plan to pursue similar activities in

future programs and plan to evaluate the merits of retaining commercialization rights for ourselves or entering into selective collaboration arrangements with leading pharmaceutical or biotechnology companies. We also may seek to establish collaborations for the sales, marketing and distribution of our products outside the U.S. If we elect to seek collaborators in the future but are unable to reach agreements with suitable collaborators, we may fail to meet our business objectives for the affected product or program. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts, if any, to establish and implement collaborations or other alternative arrangements. The terms of any collaboration or other arrangements that we establish, if any, may not be favorable to us.

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Any collaboration that we enter into may not be successful. The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. It is likely that any collaborators of ours will have significant discretion in determining the efforts and resources that they will apply to these collaborations. The risks that we may be subject to in possible future collaborations include the following:

our collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific progress by us;

our collaborators are likely to have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators' acts or omissions; and

our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations may adversely affect us financially and could harm our business reputation in the event we elect to pursue collaborations that ultimately expire or are terminated.

**Our collaboration with Shire Pharmaceuticals Ireland Ltd. (Shire) is important to our business. If this collaboration is unsuccessful or if Shire terminates this collaboration or its participation in individual programs, our business could be adversely affected.**

In November 2007, we entered into a license and collaboration agreement with Shire to jointly develop our three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal, Plicera and AT2220. Under this agreement, Shire will contribute 50% of joint development costs toward global approval, we are eligible to receive an additional \$150 million if certain clinical and regulatory milestones are met; and we are also eligible to receive up to \$240 million in sales-based milestones, as well as tiered double-digit royalties.

Shire may elect to terminate this collaboration or its participation in the development of individual programs under certain circumstances or in the event of a material uncured breach by us. We expect that a substantial amount of the funding for our operations will come from this collaboration. If this collaboration is unsuccessful, or if it is terminated in whole or in part, our business could be adversely affected and we could require additional financing earlier than we currently expect.

### **Risks Related to Our Intellectual Property**

**If we are unable to obtain and maintain protection for the intellectual property relating to our technology and products, the value of our technology and products will be adversely affected.**

Our success will depend in large part on our ability to obtain and maintain protection in the U.S. and other countries for the intellectual property covering or incorporated into our technology and products. The patent situation in the field of biotechnology and pharmaceuticals generally is highly uncertain and involves complex legal, technical, scientific and factual questions. We may not be able to obtain additional issued patents relating to our technology or products. Even if issued, patents issued to us or our licensors may be challenged, narrowed, invalidated, held to be unenforceable or circumvented, which could limit our ability to stop competitors from marketing similar products or reduce the term of patent protection we may have for our products. Changes in either patent laws or in interpretations of patent laws in the U.S. and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

we or our licensors were the first to make the inventions covered by each of our pending patent applications;

we or our licensors were the first to file patent applications for these inventions;

others will not independently develop similar or alternative technologies or duplicate any of our technologies;

any patents issued to us or our licensors will provide a basis for commercially viable products, will provide us with any competitive advantages or will not be challenged by third parties;

we will develop additional proprietary technologies that are patentable;

we will file patent applications for new proprietary technologies promptly or at all;

our patents will not expire prior to or shortly after commencing commercialization of a product; or

the patents of others will not have a negative effect on our ability to do business.

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In addition, we cannot be assured that any of our pending patent applications will result in issued patents. In particular, we have filed patent applications in the European Patent Office and other countries outside the U.S. that have not been issued as patents. These pending applications include, among others, the patent applications we license pursuant to a license agreement with Mount Sinai School of Medicine of New York University. If patents are not issued in respect of our pending patent applications, we may not be able to stop competitors from marketing similar products in Europe and other countries in which we do not have issued patents.

The patents and patent applications that we own or have licensed relating to use of Amigal expire in 2018 in the U.S. and the foreign counterparts, if issued, would expire in 2019. Patents that we own or have licensed relating to Plicera expire between 2015 and 2016 in the U.S. and in 2015 outside of the U.S. for composition of matter, and in 2018 in the U.S. for methods of use. We currently have no issued patents or pending applications covering methods of using Plicera outside of the U.S. Patents and patent applications that we own or have licensed relating to the use of AT2220 expire in 2018 in the U.S. Further, we currently do not have composition of matter or method of use protection for AT2220 outside of the U.S. Where we lack patent protection outside of the U.S., we intend to seek orphan medicinal product designation and to rely on statutory data exclusivity provisions in jurisdictions outside the U.S. where such protections are available, including Europe. If we are unable to obtain such protection outside the U.S., our competitors may be free to use and sell Plicera and/or AT2220 outside of the U.S. and there will be no liability for infringement or any other barrier to competition. The patent rights that we own or have licensed relating to our product candidates are limited in ways that may affect our ability to exclude third parties from competing against us if we obtain regulatory approval to market these product candidates. In particular:

We do not hold composition of matter patents covering Amigal and AT2220, two of our three lead product candidates. Composition of matter patents can provide protection for pharmaceutical products to the extent that the specifically covered compositions are important. For our product candidates for which we do not hold composition of matter patents, competitors who obtain the requisite regulatory approval can offer products with the same composition as our products so long as the competitors do not infringe any method of use patents that we may hold.

For some of our product candidates, the principal patent protection that covers or those we expect will cover, our product candidate is a method of use patent. This type of patent only protects the product when used or sold for the specified method. However, this type of patent does not limit a competitor from making and marketing a product that is identical to our product that is labeled for an indication that is outside of the patented method, or for which there is a substantial use in commerce outside the patented method.

Moreover, physicians may prescribe such a competitive identical product for indications other than the one for which the product has been approved, or off-label indications, that are covered by the applicable patents. Although such off-label prescriptions may infringe or induce infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the U.S. and many other jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind the actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in our or their issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications. If a third party has also filed a U.S. patent application covering our product candidates or a similar invention, we may have to participate in an adversarial proceeding, known as an interference, declared by the U.S. Patent and Trademark Office to determine priority of invention in the U.S. The costs of these proceedings could be substantial and it is possible that our efforts could be unsuccessful, resulting in a loss of our U.S. patent position.

**If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.**

We are a party to a number of license agreements including agreements with the Mount Sinai School of Medicine of New York University, the University of Maryland, Baltimore County and Novo Nordisk A/S, pursuant to which we

license key intellectual property relating to our lead product candidates. We expect to enter into additional licenses in the future. Under our existing licenses, we have the right to enforce the licensed patent rights. Our existing licenses impose, and we expect that future licenses will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license, in which event we might not be able to market any product that is covered by the licensed patents.

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**If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.**

We seek to protect our know-how and confidential information, in part, by confidentiality agreements with our employees, corporate partners, outside scientific collaborators, sponsored researchers, consultants and other advisors. We also have confidentiality and invention or patent assignment agreements with our employees and our consultants. If our employees or consultants breach these agreements, we may not have adequate remedies for any of these breaches. In addition, our trade secrets may otherwise become known to or be independently developed by others. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. may be less willing to protect trade secrets. Costly and time consuming litigation could be necessary to seek to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

**If we infringe or are alleged to infringe the intellectual property rights of third parties, it will adversely affect our business.**

Our research, development and commercialization activities, as well as any product candidates or products resulting from these activities, may infringe or be accused of infringing one or more claims of an issued patent or may fall within the scope of one or more claims in a published patent application that may subsequently issue and to which we do not hold a license or other rights. Third parties may own or control these patents or patent applications in the U.S. and abroad. These third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we or they could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

No assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, which contain claims covering our products, technology or methods. Because of the number of patents issued and patent applications filed in our field, we believe there is a risk that third parties may allege they have patent rights encompassing our products, technology or methods.

We are aware, for example, of U.S. patents, and corresponding international counterparts, owned by third parties that contain claims related to treating protein misfolding. We have received written notice from one of these third parties indicating that it believes we may need a license to certain of these patents in order to avoid infringing such patents. If any of these third party patents were to be asserted against us we do not believe that our proposed products would be found to infringe any valid claim of these patents. If we were to challenge the validity of any issued U.S. patent in court, we would need to overcome a presumption of validity that attaches to every patent. This burden is high and would require us to present clear and convincing evidence as to the invalidity of the patent's claims. There is no assurance that a court would find in our favor on infringement or validity.

In order to avoid or settle potential claims with respect to any of the patent rights described above or any other patent rights of third parties, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our future collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could harm our business significantly.

Others may sue us for infringing their patent or other intellectual property rights or file nullity, opposition or interference proceedings against our patents, even if such claims are without merit, which would similarly harm our business. Furthermore, during the course of litigation, confidential information may be disclosed in the form of documents or testimony in connection with discovery requests, depositions or trial testimony. Disclosure of our confidential information and our involvement in intellectual property litigation could materially adversely affect our business.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a

party to other patent litigation and other proceedings, including interference proceedings declared by the U.S. Patent and Trademark Office and opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our products and technology. Even if we prevail, the cost to us of any patent litigation or other proceeding could be substantial.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from any litigation could significantly limit our ability to continue our operations. Patent litigation and other proceedings may also absorb significant management time.



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Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We try to ensure that our employees do not use the proprietary information or know-how of others in their work for us. However, we may be subject to claims that we or these employees have inadvertently or otherwise used or disclosed intellectual property, trade secrets or other proprietary information of any such employee's former employer. Litigation may be necessary to defend against these claims and, even if we are successful in defending ourselves, could result in substantial costs to us or be distracting to our management. If we fail to defend any such claims, in addition to paying monetary damages, we may jeopardize valuable intellectual property rights, disclose confidential information or lose personnel.

### **Risks Related to Regulatory Approval of Our Product Candidates**

#### **If we are not able to obtain and maintain required regulatory approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.**

Our product candidates, including Amigal, Plicera and AT2220, and the activities associated with their development and commercialization, including their testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the U.S. and by comparable authorities in other countries. Failure to obtain regulatory approval for a product candidate will prevent us from commercializing the product candidate in the jurisdiction of the regulatory authority. We have not obtained regulatory approval to market any of our product candidates in any jurisdiction. We have only limited experience in filing and prosecuting the applications necessary to obtain regulatory approvals and expect to rely on third party contract research organizations to assist us in this process.

Securing FDA approval requires the submission of extensive preclinical and clinical data and supporting information to the FDA for each therapeutic indication to establish the product candidate's safety and efficacy. Securing FDA approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the FDA. Our future products may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

Our product candidates may fail to obtain regulatory approval for many reasons, including:

- our failure to demonstrate to the satisfaction of the FDA or comparable regulatory authorities that a product candidate is safe and effective for a particular indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable regulatory authorities for approval;
- our inability to demonstrate that a product candidate's benefits outweigh its risks;
- our inability to demonstrate that the product candidate is at least as effective as existing therapies;
- the FDA's or comparable regulatory authorities' disagreement with the manner in which we interpret the data from preclinical studies or clinical trials;
- the FDA's or comparable regulatory authorities' failure to approve the manufacturing processes, quality procedures or manufacturing facilities of third party manufacturers with which we contract for clinical or commercial supplies; and
- a change in the approval policies or regulations of the FDA or comparable regulatory authorities or a change in the laws governing the approval process.

The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application may cause delays in the approval or rejection of an application. The FDA and non-U.S. regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post approval commitments that render the approved product not commercially viable. Any FDA or other regulatory approval of our

product candidates, once obtained, may be withdrawn, including for failure to comply with regulatory requirements or if clinical or manufacturing problems follow initial marketing.

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**Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or commercialization.**

Undesirable side effects caused by our product candidates could interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing our product candidates and generating revenues from their sale. For example, in a clinical trial of Amigal for Fabry disease, one patient with a history of hypertension experienced increased blood pressure during the course of the trial which was reported by the investigator as possibly related to the drug. Further, Amigal has been shown to cause reversible infertility effects in mice.

In addition, if any of our product candidates receive marketing approval and we or others later identify undesirable side effects caused by the product:

regulatory authorities may require the addition of restrictive labeling statements;

regulatory authorities may withdraw their approval of the product; and

we may be required to change the way the product is administered or conduct additional clinical trials.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product candidate, which in turn could delay or prevent us from generating significant revenues from its sale or adversely affect our reputation.

**We may not be able to obtain orphan drug exclusivity for our product candidates. If our competitors are able to obtain orphan drug exclusivity for their products that are the same drug as our product candidates, we may not be able to have competing products approved by the applicable regulatory authority for a significant period of time.**

Regulatory authorities in some jurisdictions, including the U.S. and Europe, may designate drugs for relatively small patient populations as orphan drugs. We obtained orphan drug designations from the FDA for Amigal for the treatment of Fabry disease on February 25, 2004, for the active ingredient in Plicera for the treatment of Gaucher disease on January 10, 2006 and for AT2220 for the treatment of Pompe disease on June 18, 2007. We also obtained orphan medicinal product designation in the EU for Amigal on May 22, 2006 and for Plicera on October 23, 2007. We anticipate filing for orphan drug designation in the EU for AT2220 for the treatment of Pompe disease. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the applicable regulatory authority from approving another marketing application for the same drug for that time period. The applicable period is 7 years in the U.S. and 10 years in Europe. For a drug composed of small molecules, the FDA defines "same drug" as a drug that contains the same active molecule and is intended for the same use. Obtaining orphan drug exclusivity for Amigal and Plicera may be important to each of the product candidate's success. Even if we obtain orphan drug exclusivity for Amigal or Plicera for these indications, we may not be able to maintain it. For example, if a competitive product that is the same drug as our product candidate is shown to be clinically superior to our product candidate, any orphan drug exclusivity we have obtained will not block the approval of such competitive product and we may effectively lose what had previously been orphan drug exclusivity.

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

Any product for which we obtain marketing approval, along with the manufacturing processes, post approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and comparable regulatory authorities. These requirements include submissions of safety and other post marketing information and reports, registration requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. Even if we obtain regulatory approval of a product, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post marketing testing and surveillance to monitor the safety or efficacy of the product. We also may be subject to state laws and registration requirements covering the distribution of our products. Later discovery of previously unknown problems with our products, manufacturers or manufacturing

processes, or failure to comply with regulatory requirements, may result in actions such as:

- restrictions on such products, manufacturers or manufacturing processes;
- warning letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- voluntary or mandatory recall;
- finances;

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suspension or withdrawal of regulatory approvals or refusal to approve pending applications or supplements to approved applications that we submit;  
refusal to permit the import or export of our products;  
product seizure or detentions;  
injunctions or the imposition of civil or criminal penalties; and  
adverse publicity.

If we, or our suppliers, third party contractors, clinical investigators or collaborators are slow to adapt, or are unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we or our collaborators may lose marketing approval for our products when and if any of them are approved, resulting in decreased revenue from milestones, product sales or royalties.

### **Failure to obtain regulatory approval in international jurisdictions would prevent us from marketing our products abroad.**

We intend to have our products marketed outside the U.S. In order to market our products in the EU and many other jurisdictions, we must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. The approval procedures vary among countries and can involve additional testing and clinical trials. The time required to obtain approval may differ from that required to obtain FDA approval. The regulatory approval process outside the U.S. may include all of the risks associated with obtaining FDA approval. In addition, in many countries outside the U.S., it is required that the product be approved for reimbursement by government-backed healthcare regulators or insurance providers before the product can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the U.S. on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the U.S. does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market.

### **Risks Related to Employee Matters and Managing Growth**

#### **Our future success depends on our ability to retain our Chief Executive Officer and other key executives and to attract, retain and motivate qualified personnel.**

We are highly dependent on John F. Crowley, our President and Chief Executive Officer, Matthew R. Patterson, our Chief Operating Officer, James E. Dentzer, our Chief Financial Officer, and David J. Lockhart, Ph.D., our Chief Scientific Officer. These executives each have significant pharmaceutical industry experience, including Mr. Crowley, with whom we have entered into an employment agreement that runs for successive one year terms until either we or Mr. Crowley elect to terminate the agreement. We may terminate Mr. Crowley's employment without cause at any time, or we may decide not to extend Mr. Crowley's agreement at the end of any term, or he may terminate his employment for good reason at any time, in each case subject to certain severance payments and benefits.

Mr. Crowley is a commissioned officer in the U.S. Navy (Reserve). The U.S. recently called Mr. Crowley to service, which he fulfilled, from September 11, 2006 to March 5, 2007, and he may be called to active duty service again at any time. The loss of Mr. Crowley for protracted military duty could materially adversely affect our business. We are also parties to employment agreements with each of Messrs. Patterson and Dentzer and Dr. Lockhart. These employment agreements each provide for an initial term of two years, and will continue thereafter for successive two-year periods until we provide the executive with written notice of the end of the agreement in accordance with its terms. We may terminate any of these executives without cause at any time, or one of these executives may quit for good reason within six months of the occurrence of certain corporate changes, in each case subject to certain severance payments and benefits. The loss of the services of any of these executives might impede the achievement of our research, development and commercialization objectives and materially adversely affect our business. We do not maintain key person insurance on Mr. Crowley or on any of our other executive officers.

Recruiting and retaining qualified scientific personnel, clinical personnel and sales and marketing personnel will also be critical to our success. Our industry has experienced a high rate of turnover in recent years. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel, particularly in New Jersey and surrounding areas. Although we

believe we offer competitive salaries and benefits, we may have to increase spending in order to retain personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

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**We expect to expand our development, regulatory and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.**

We are a development stage company with 115 full-time employees as of December 31, 2008. Of these employees, 79 work primarily in research and development and 36 provide administrative services. We will continue to experience growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and sales and marketing. Assuming our plans and business conditions progress consistent with our current projections, we plan to grow to a total of approximately 125 to 135 employees by the end of 2009. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability on the part of our management to manage growth could delay the execution of our business plans or disrupt our operations.

**Risks Related to Our Common Stock**

**Our executive officers, directors and principal stockholders maintain the ability to control all matters submitted to our stockholders for approval.**

Our executive officers, directors and principal stockholders beneficially own shares representing approximately 74% of our common stock. As a result, if these stockholders were to choose to act together, they would be able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, will control the election of directors and approval of any merger, consolidation, sale of all or substantially all of our assets or other business combination or reorganization. This concentration of voting power could delay or prevent an acquisition of us on terms that other stockholders may desire. The interests of this group of stockholders may not always coincide with the interests of other stockholders, and they may act, whether by meeting or written consent of stockholders, in a manner that advances their best interests and not necessarily those of other stockholders, including obtaining a premium value for their common stock, and might affect the prevailing market price for our common stock.

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

Provisions in our corporate charter and our bylaws that became effective upon our initial public offering may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions:

- establish a classified board of directors, and, as a result, not all directors are elected at one time;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from our board of directors;
- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- limit who may call stockholder meetings;
- authorize our board of directors to issue preferred stock, without stockholder approval, which could be used to institute a poison pill that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and

require the approval of the holders of at least 67% of the votes that all our stockholders would be entitled to cast to amend or repeal certain provisions of our charter or bylaws.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.



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**An active trading market for our common stock may not develop.**

We completed our initial public offering of equity securities in June 2007, and prior to this offering, there was no public market for our common stock. Although we have been listed on The NASDAQ Global Market, an active trading market for our common stock may never develop or be sustained. If an active market for our common stock does not develop or is not sustained, it may be difficult for our stockholders to sell shares since our initial public offering without depressing the market price for our common stock.

**If the price of our common stock is volatile, purchasers of our common stock could incur substantial losses.**

The price of our common stock is volatile. The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- results of clinical trials of our product candidates or those of our competitors;
- our entry into or the loss of a significant collaboration;
- regulatory or legal developments in the U.S. and other countries, including changes in the health care payment systems;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations;
- general economic, industry and market conditions;
- results of clinical trials conducted by others on drugs that would compete with our product candidates;
- developments or disputes concerning patents or other proprietary rights;
- public concern over our product candidates or any products approved in the future;
- litigation;
- future sales or anticipated sales of our common stock by us or our stockholders; and
- the other factors described in this "Risk Factors" section.

For these reasons and others potential purchasers of our common stock should consider an investment in our common stock as risky and invest only if they can withstand a significant loss and wide fluctuations in the marked value of their investment.

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

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. If securities or industry analysts do not continue coverage of us the trading price for our common stock would be negatively affected. In the event we obtain securities or industry analyst coverage, if one or more of the analysts who covers us downgrades our common stock, the price of our common stock would likely decline. If one or more of these analysts ceases to cover us or fails to publish regular reports on us, interest in the purchase of our common stock could decrease, which could cause the price of our common stock or trading volume to decline.

**We will incur increased costs as a result of being a public company.**

As a public company, we will incur significant legal, accounting, reporting and other expenses that we did not incur as a private company, including costs related to compliance with the regulations of the Sarbanes-Oxley Act of 2002. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. We also expect these new rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, we may experience more difficulty attracting and retaining qualified individuals to serve on our board of directors or as executive officers. We cannot predict or estimate the amount of additional costs we may incur as a result of these requirements or the timing of such costs.



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**Item 1B. UNRESOLVED STAFF COMMENTS.**

None.

**Item 2. PROPERTIES.**

We currently lease approximately 59,000 square feet of subleased office and laboratory space in Cranbury, New Jersey and 7,700 square feet of subleased office and laboratory space in San Diego, California under various lease agreements that terminate no later than February 2012. We believe that our current office and laboratory facilities are adequate and suitable for our current and anticipated needs.

**Item 3. LEGAL PROCEEDINGS.**

We are not currently a party to any material legal proceedings.

**Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.**

No matters were submitted to a vote of security holders during the fourth quarter of the year ended December 31, 2008.

**Table of Contents****PART II****Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.****Market For Our Common Stock**

Our common stock has been traded on the NASDAQ Global Market under the symbol FOLD since May 31, 2007. Prior to that time, there was no public market for our common stock. The following table sets forth, for the periods indicated, the range of high and low closing sales prices of our common stock as quoted on the NASDAQ Global Market for the period since our initial public offering on May 31, 2007.

|                | <b>High</b> | <b>Low</b> |
|----------------|-------------|------------|
| <b>2008</b>    |             |            |
| First Quarter  | \$ 11.84    | \$ 9.00    |
| Second Quarter | 12.35       | 9.00       |
| Third Quarter  | 18.00       | 10.52      |
| Fourth Quarter | 15.78       | 7.16       |

|                                    | <b>High</b> | <b>Low</b> |
|------------------------------------|-------------|------------|
| <b>2007</b>                        |             |            |
| Second Quarter (from May 31, 2007) | \$ 16.80    | \$ 10.30   |
| Third Quarter                      | 16.75       | 10.00      |
| Fourth Quarter                     | 18.22       | 9.20       |

The closing price for our common stock as reported by the NASDAQ Global Market on January 29, 2009 was \$8.68 per share. As of January 29, 2009, there were 90 holders of record of our common stock.

**Dividends**

We have never declared or paid any dividends on our capital stock. We currently intend to retain any future earnings to finance our research and development efforts, the further development of our pharmacological chaperone technology and the expansion of our business. We do not intend to declare or pay cash dividends to our stockholders in the foreseeable future.

**Recent Sales of Unregistered Securities**

None.

**Use of Proceeds from the Sale of Registered Securities**

Our initial public offering of common stock was effected through a Registration Statement on Form S-1 (File No. 333-141700) that was declared effective by the Securities and Exchange Commission (SEC) on May 30, 2007, which registered an aggregate of 5,750,000 shares of our common stock. On June 5, 2007, at the closing of the offering, 5,000,000 shares of common stock were sold on our behalf at an initial public offering price of \$15.00 per share, for aggregate offering proceeds of \$75.0 million. The initial public offering was underwritten and managed by Morgan Stanley, Merrill Lynch & Co., JPMorgan, Lazard Capital Markets and Pacific Growth Equities, LLC. Following the sale of the 5,000,000 shares, the public offering terminated.

We paid to the underwriters underwriting discounts totaling approximately \$5.3 million in connection with the offering. In addition, we incurred additional costs of approximately \$1.6 million in connection with the offering, which when added to the underwriting discounts paid by us, amounts to total expenses of approximately \$6.9 million. Thus, the net offering proceeds to us, after deducting underwriting discounts and offering expenses, were approximately \$68.1 million. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates.

As of December 31, 2008, we had invested the \$68.1 million in net proceeds from the offering in money market funds and in investment-grade, interest bearing instruments, pending their use. Through December 31, 2008, we used these proceeds for clinical development of our drug candidates, for research and development activities relating to additional preclinical programs and to fund working capital and other general corporate purposes, which may include

the acquisition or licensing of complementary technologies, products or businesses.

**Table of Contents****Performance Graph**

The following performance graph shows the total shareholder return of an investment of \$100 cash on May 31, 2007, the date our common stock first started trading on the NASDAQ Global Market, for (i) our common stock, (ii) the NASDAQ Composite Index (U.S.) and (iii) the NASDAQ Biotechnology Index as of December 31, 2008. Pursuant to applicable SEC rules, all values assume reinvestment of the full amount of all dividends, however no dividends have been declared on our common stock to date. The stockholder return shown on the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.

\* \$100 invested on May 31, 2007 in Amicus Therapeutics, Inc. stock or in index-including reinvestment of dividends.

|                                  | <b>May-07</b> | <b>Jun-07</b> | <b>Sep-07</b> | <b>Dec-07</b> | <b>Mar-08</b> | <b>Jun-08</b> | <b>Sep-08</b> | <b>Dec-08</b> |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Amicus Therapeutics, Inc.</b> | 100           | 80            | 116           | 74            | 74            | 74            | 105           | 55            |
| <b>NASDAQ Composite</b>          | 100           | 100           | 104           | 102           | 88            | 88            | 88            | 61            |
| <b>NASDAQ Biotechnology</b>      | 100           | 96            | 102           | 100           | 93            | 95            | 100           | 87            |

*The stock price performance included in this graph is not necessarily indicative of future stock price performance.*

**Table of Contents****Issuer Purchases of Equity Securities**

The following table sets forth purchases of our common stock for the three months ended December 31, 2008:

| <b>Period</b>                        | <b>(a) Total<br/>number<br/>of shares<br/>purchased</b> | <b>(b)<br/>Average<br/>Price Paid<br/>per Share</b> | <b>(c) Total<br/>number of<br/>shares<br/>purchased as<br/>part of<br/>publicly<br/>announced<br/>plans or<br/>programs</b> | <b>(d) Maximum<br/>number of<br/>shares that may yet<br/>be<br/>purchased under<br/>the plans or<br/>programs</b> |
|--------------------------------------|---|---|---|---|
| October 1, 2008 - October 31, 2008   | 220   | \$ 15.10  |   | 5,295   |
| November 1, 2008 - November 31, 2008 | 220   | \$ 10.45  |   | 5,075   |
| December 1, 2008 - December 31, 2008 | 220   | \$ 7.98   |   | 4,855   |
| <b>Total</b>                         | <b>660</b>  |   |   |   |

Pursuant to a restricted stock award dated October 2, 2006 between Amicus Therapeutics, Inc. and James E. Dentzer, Chief Financial Officer, Mr. Dentzer was granted 40,000 shares, 25% of which vested on October 2, 2007 and the remaining shares vest in a series of thirty-six successive equal monthly installments which began on November 1, 2007, with the final installment due to vest on November 1, 2010. In order to comply with the minimum statutory federal tax withholding rate of 25% plus 1.45% for Medicare, Mr. Dentzer surrenders a portion of his vested shares on each vesting date, representing 26.45% of the total value of the shares then vested, to Amicus Therapeutics, Inc. in connection with his withholding obligations.

**Table of Contents****Item 6. SELECTED FINANCIAL DATA.****(in thousands except share and per share data)**

|   | Year Ended December 31 |          |          |          |           | Period from<br>February 4,<br>2002<br>(inception)<br>to<br>December<br>31,<br>2008 |
|---|------------------------|----------|----------|----------|-----------|--|
|   | 2004                   | 2005     | 2006     | 2007     | 2008      |  |
| <b>Statement of Operations</b>            |                        |          |          |          |           |  |
| <b>Data:</b>                              |                        |          |          |          |           |  |
| Revenue:                                  |                        |          |          |          |           |  |
| Research revenue                          | \$                     | \$       | \$       | \$ 1,375 | \$ 12,189 | \$ 13,564  |
| Collaboration revenue                     |                        |          |          | 409      | 2,778     | 3,187  |
| Total revenue                             |                        |          |          | 1,784    | 14,967    | 16,751   |
| Operating expenses:                       |                        |          |          |          |           |  |
| Research and development                  | 6,301                  | 13,652   | 33,630   | 31,074   | 37,764    | 127,642  |
| General and administrative                | 2,081                  | 6,877    | 12,277   | 15,278   | 19,666    | 57,736   |
| Impairment of leasehold improvements      |                        |          |          |          |           | 1,030  |
| Depreciation and amortization             | 146                    | 303      | 952      | 1,237    | 1,493     | 4,287  |
| In-process research and development       |                        |          |          |          |           | 418  |
| Total operating expenses                  | 8,528                  | 20,832   | 46,859   | 47,589   | 58,923    | 191,113  |
| Loss from operations                      | (8,528)                | (20,832) | (46,859) | (45,805) | (43,956)  | (174,362)  |
| Other income (expenses):                  |                        |          |          |          |           |  |
| Interest income                           | 190                    | 610      | 1,990    | 5,135    | 4,819     | 12,760   |
| Interest expense                          | (550)                  | (82)     | (273)    | (348)    | (218)     | (1,648)  |
| Change in fair value of warrant liability | (2)                    | (280)    | (23)     | (149)    |           | (454)  |
| Other expense                             |                        |          | (1,180)  |          |           | (1,180)  |
| Loss before tax benefit                   | (8,890)                | (20,584) | (46,345) | (41,167) | (39,355)  | (164,884)  |
| Income tax benefit                        | 83                     | 612      |          |          |           | 695  |



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|   |            |             |             |             |             |           |
|---|------------|-------------|-------------|-------------|-------------|-----------|
| Net loss  | (8,807)    | (19,972)    | (46,345)    | (41,167)    | (39,355)    | (164,189) |
| Deemed dividend   |            |             | (19,424)    |             |             | (19,424)  |
| Preferred stock accretion   | (126)      | (139)       | (159)       | (351)       |             | (802)     |
| Net loss attributable to common stockholders                                    | \$ (8,933) | \$ (20,111) | \$ (65,928) | \$ (41,518) | \$ (39,355) | (184,415) |
| Net loss attributable to common stockholders per common share basic and diluted | \$ (29.05) | \$ (49.02)  | \$ (89.58)  | \$ (3.14)   | \$ (1.75)   |           |
| Weighted-average common shares outstanding basic and diluted                    | 307,539    | 410,220     | 735,967     | 13,235,755  | 22,493,803  |           |

As of December 31,

|   | 2004        | 2005        | 2006        | 2007       | 2008       |
|---|-------------|-------------|-------------|------------|------------|
| <b>Balance Sheet Data:</b>                          |             |             |             |            |            |
| Cash and cash equivalents and marketable securities | \$ 4,336    | \$ 24,418   | \$ 54,699   | \$ 161,527 | \$ 121,124 |
| Working capital                                     | 3,569       | 22,267      | 44,814      | 147,247    | 110,209    |
| Total assets  | 5,073       | 28,670      | 59,645      | 167,097    | 128,773    |
| Total liabilities                                   | 1,346       | 4,031       | 13,071      | 63,800     | 57,730     |
| Redeemable convertible preferred stock              | 20,013      | 60,469      | 124,089     |            |            |
| Deficit accumulated during the development stage    | (17,351)    | (37,322)    | (83,667)    | (124,834)  | (164,189)  |
| Total stockholders (deficiency) equity              | \$ (16,287) | \$ (35,830) | \$ (77,515) | \$ 103,297 | \$ 71,043  |

**Table of Contents****Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.****Overview**

Amicus Therapeutics Inc. (Amicus) is a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of novel small molecule, orally-administered drugs, known as pharmacological chaperones, for the treatment of a range of human genetic diseases. Certain human diseases result from mutations in specific genes that, in many cases, lead to the production of proteins with reduced stability. Proteins with such mutations may not fold into their correct three-dimensional shape and are generally referred to as misfolded proteins. Misfolded proteins are often recognized by cells as having defects and, as a result, may be eliminated prior to reaching their intended location in the cell. The reduced biological activity of these proteins leads to impaired cellular function and ultimately to disease. Our novel approach to the treatment of human genetic diseases consists of using pharmacological chaperones that selectively bind to the target protein; increasing the stability of the protein and helping it fold into the correct three-dimensional shape. This allows proper trafficking of the protein, thereby increasing protein activity, improving cellular function and potentially reducing cell stress. We are researching the applicability of our platform pharmacological chaperone technology to treat various diseases in our discovery program and developing the use of our lead compounds in our clinical development program. We completed our Phase 2 clinical trials of Amigal (migalastat hydrochloride) and are currently conducting Phase 2 clinical trials of Plicera (isofagomine tartrate) and AT2220 (1-deoxynojirimycin HCl).

We have generated significant losses to date and expect to continue to generate losses as we continue the clinical development of Amigal, Plicera and AT2220 and conduct research on other programs. These activities are budgeted to expand over time and will require further resources if we are to be successful. From our inception in February 2002 through December 31, 2008, we have accumulated a deficit of \$164.2 million. As we have not yet generated commercial sales revenue from any of our product candidates, our losses will continue and are likely to be substantial over the next several years. Although Shire will be responsible for a portion of the costs associated with the clinical development of Amigal, Plicera and AT2220 as discussed below, we may need to obtain additional funds to further develop our research and development programs and product candidates.

In June 2007, we completed our initial public offering (IPO) of 5,000,000 shares of common stock at a public offering price of \$15.00 per share. Net cash proceeds from the initial public offering were approximately \$68.1 million after deducting underwriting discounts, commissions and offering expenses payable by us. In connection with the closing of the initial public offering, all of Amicus' shares of redeemable convertible preferred stock outstanding at the time of the offering were automatically converted into 16,112,721 shares of common stock.

***Collaboration with Shire Pharmaceuticals Ireland Ltd. (Shire)***

On November 7, 2007, we entered into a license and collaboration agreement with Shire. Under the agreement, Amicus and Shire will jointly develop Amicus' three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal, Plicera and AT2220. We granted Shire the rights to commercialize these products outside the United States (U.S.). We will retain all rights to our other programs and to develop and commercialize Amigal, Plicera and AT2220 in the U.S.

We received an initial, non-refundable license fee payment of \$50 million from Shire in 2007. Joint development costs toward global approval of the three compounds are being shared 50/50 as per the collaboration agreement. In addition, we are eligible to receive, for all three drug product candidates, aggregate potential milestone payments of up to \$150 million if certain clinical and regulatory milestones are achieved for all three of the programs, and \$240 million in sales-based milestones for all three of the programs. We will also be eligible to receive tiered double-digit royalties on net sales of the products which are marketed outside of the U.S.

**Financial Operations Overview*****Revenue***

The collaboration agreement with Shire became effective in November 2007. Shire paid us an initial, non-refundable license fee of \$50 million at that time. At December 31, 2008, we recognized approximately \$2.8 million of the license fee in Collaboration Revenue and \$12.2 million of Research Revenue for reimbursed research and development fees. The license fee is being recognized as Collaboration Revenue over the 18 year performance

obligation period. We have not generated any commercial sales revenue since our inception.

**Table of Contents****Research and Development Expenses**

We expect our research and development expense to increase as we continue to develop our product candidates.

Research and development expense consists of:

- internal costs associated with our research activities;
- payments we make to third party contract research organizations, contract manufacturers, investigative sites, and consultants;
- technology license costs;
- manufacturing development costs;
- personnel related expenses, including salaries, benefits, travel, and related costs for the personnel involved in drug discovery and development;
- activities relating to regulatory filings and the advancement of our product candidates through preclinical studies and clinical trials; and
- facilities and other allocated expenses, which include direct and allocated expenses for rent, facility maintenance, as well as laboratory and other supplies.

We have multiple research and development projects ongoing at any one time. We utilize our internal resources, employees and infrastructure across multiple projects. We record and maintain information regarding external, out-of-pocket research and development expenses on a project specific basis.

We expense research and development costs as incurred, including payments made to date under our license agreements. We believe that significant investment in product development is a competitive necessity and plan to continue these investments in order to realize the potential of our product candidates. From our inception in February 2002 through December 31, 2008, we have incurred research and development expense in the aggregate of \$127.6 million.

The following table summarizes our principal product development programs, including the related stages of development for each product candidate in development, and the out-of-pocket, third party expenses incurred with respect to each product candidate (in thousands).

| Product Candidate                         | Years Ended December 31, |          |          | Period from   |
|---|--------------------------|----------|----------|---|
|   | 2006                     | 2007     | 2008     | February 4,<br>2002<br>(Inception) to<br>December 31,<br>2008 |
| Third party direct project expenses       |                          |          |          |   |
| Amigal (Fabry Disease Ended Phase 2)      | \$ 3,361                 | \$ 4,648 | \$ 4,410 | \$ 25,440   |
| Plicera (Gaucher Disease Phase 2)         | 9,905                    | 4,378    | 2,796    | 18,904  |
| AT2220 (Pompe Disease Phase 2)            | 4,427                    | 3,426    | 2,836    | 11,024  |
| Total third party direct project expenses | 17,693                   | 12,452   | 10,042   | 55,368  |
| Other project costs <sup>(1)</sup>        |                          |          |          |   |
| Personnel costs                           | 8,187                    | 9,720    | 14,535   | 38,966  |
| Other costs <sup>(2)</sup>                | 7,750                    | 8,902    | 13,187   | 33,308  |
| Total other project costs                 | 15,937                   | 18,622   | 27,722   | 72,274  |

|                                      |    |        |    |        |    |        |    |         |
|--------------------------------------|----|--------|----|--------|----|--------|----|---------|
| Total research and development costs | \$ | 33,630 | \$ | 31,074 | \$ | 37,764 | \$ | 127,642 |
|--------------------------------------|----|--------|----|--------|----|--------|----|---------|

(1) Other project costs are leveraged across multiple clinical and pre-clinical projects.

(2) Other costs include facility, supply, overhead, and licensing costs that support multiple clinical and preclinical projects.

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The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of our product candidates. As a result, we are not able to reasonably estimate the period, if any, in which material net cash inflows may commence from our product candidates, Amigal, Plicera, AT2220 or any of our other preclinical product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the conduct, duration and cost of clinical trials, which vary significantly over the life of a project as a result of evolving events during clinical development, including:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the results of our clinical trials; and
- any mandate by the U.S. Food and Drug Administration (FDA) or other regulatory authority to conduct clinical trials beyond those currently anticipated.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of the foregoing variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those which we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Drug development may take several years and millions of dollars in development costs.

### ***General and Administrative Expense***

General and administrative expense consists primarily of salaries and other related costs, including stock-based compensation expense, for persons serving in our executive, finance, accounting, legal, information technology and human resource functions. Other general and administrative expense includes facility-related costs not otherwise included in research and development expense, promotional expenses, costs associated with industry and trade shows, and professional fees for legal services, including patent-related expense and accounting services. We expect that our general and administrative expenses will increase as we add personnel and are subject to the reporting obligations applicable to public companies. From our inception in February 2002 through December 31, 2008, we spent \$57.7 million on general and administrative expense.

### ***Interest Income and Interest Expense***

Interest income consists of interest earned on our cash and cash equivalents and marketable securities. Interest expense consists of interest incurred on our capital lease facility.

### ***Critical Accounting Policies and Significant Judgments and Estimates***

The discussion and analysis of our financial condition and results of operations are based on our financial statements, which we have prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate our estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the following discussion represents our critical accounting policies.

### ***Revenue Recognition***

We recognize revenue in accordance with the Securities and Exchange Commission (SEC) Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements* (SAB 101), as amended by Staff Accounting Bulletin

No. 104, *Revision of Topic 13* (SAB 104). Currently, we derive all of our revenues from our collaboration agreement with Shire and expect that we will continue to derive all, or at least a substantial portion of our revenues, from collaboration agreements over the next several years.

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Collaboration arrangements may contain multiple elements, including up front licensing fees, reimbursement payments for ongoing research and development, payments for achieving research and development and product approval milestones, sales-based milestones and royalties based on percentages of net product sales. When evaluating multiple element arrangements, we follow the provisions of Emerging Issues Task Force (EITF) Issue 00-21, *Revenue Arrangements with Multiple Deliverables* (EITF 00-21). EITF 00-21 provides guidance on determining if an arrangement involves a single unit of accounting or separate units of accounting and if the arrangement is determined to have separate units, how to allocate amounts received in the arrangement for revenue recognition purposes. If a collaboration agreement involves a single unit of accounting, the revenue recognition policy and the performance obligation period is determined for the entire arrangement while if separate units of accounting are involved, we determine a revenue recognition policy for each unit.

In November 2007, we entered into a collaboration agreement with Shire. We evaluated the multiple elements of this agreement in accordance with the guidance in EITF 00-21 and determined that the multiple deliverables did not have value on a stand alone basis and were unable to obtain verifiable objective evidence to determine the fair value of undelivered elements. As a result, we concluded that there was one single unit of accounting for this collaboration and determined that the period of our performance obligations under the agreement is 18 years. Upon execution of the agreement in November 2007, we received an initial upfront payment of \$50 million from Shire which is being amortized to Collaboration Revenue over the period of the performance obligations which is contractually defined at 18 years.

Additionally, under the agreement we are entitled to receive reimbursement of up to 50% of research and development costs incurred in the development of the products covered by the agreement. We recognize revenue for reimbursed research and development costs in accordance with EITF Issue 99-19, *Reporting Revenue Gross as a Principal Versus Net as an Agent* (EITF 99-19). We will record the revenue associated with these reimbursable amounts to Research Revenue while the costs associated with these reimbursable amounts will be recorded in research and development expenses.

***Accrued Expenses***

As part of the process of preparing our financial statements, we are required to estimate accrued expenses. This process involves identifying services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. Examples of estimated accrued expenses include:

- fees owed to contract research organizations in connection with preclinical and toxicology studies and clinical trials;
- fees owed to investigative sites in connection with clinical trials;
- fees owed to contract manufacturers in connection with the production of clinical trial materials;
- fees owed for professional services, and
- unpaid salaries, wages and benefits.

***Stock-Based Compensation***

Effective January 1, 2006, we adopted the fair value recognition provisions of Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards (SFAS) No. 123(R), *Share-Based Payment*, (SFAS No. 123(R)) using the prospective transition method. Under the prospective transition method, compensation expense is recognized in the financial statements on a prospective basis for all share-based payments granted subsequent to December 31, 2005, based upon the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). Options granted prior to January 1, 2006, as a non-public company and accounted for using the intrinsic value method, will continue to be expensed over the vesting period. The fair value of awards expected to vest, as measured at grant date, is expensed on a straight-line basis over the vesting period of the related awards. Under the prospective transition method, results for prior periods are not restated.

We recognized stock-based compensation expense of \$3.3 million, \$4.0 million, and \$6.4 million for the years ended 2006, 2007 and 2008, respectively. The following table summarizes information related to stock compensation



expense recognized in the income statement (in thousands):

|   | <b>Years Ended December 31,</b> |             |             |
|---|---------------------------------|-------------|-------------|
|   | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| Stock compensation expense recognized in: |                                 |             |             |
| Research and development expense          | \$ 1.7                          | \$ 1.6      | \$ 2.5      |
| General and administrative expense        | 1.6                             | 2.4         | 3.9         |
| Total stock compensation expense          | \$ 3.3                          | \$ 4.0      | \$ 6.4      |

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We use the Black-Scholes option pricing model when estimating the value for stock-based awards. The fair value of stock option awards subsequent to December 31, 2005 is amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on a blended weighted average of historical information of our stock and the weighted average of historical information of similar public entities for which historical information was available. We will continue to use a blended weighted average approach using our own historical volatility and other similar public entity volatility information until our historical volatility is relevant to measure expected volatility for future option grants. The average expected life was determined according to the SEC shortcut approach as described in SAB 107, *Disclosure about Fair Value of Financial Instruments* (SAB 107), which is the mid-point between the vesting date and the end of the contractual term. The risk-free interest rate is based on U.S. Treasury, zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. Forfeitures are estimated based on voluntary termination behavior, as well as a historical analysis of actual option forfeitures. The weighted average assumptions used in the Black-Scholes option pricing model are as follows:

|                                    | <b>Years Ended December 31,</b> |             |             |
|------------------------------------|---------------------------------|-------------|-------------|
|                                    | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| Expected stock price volatility    | 74.8%                           | 78.3%       | 78.2%       |
| Risk free interest rate            | 4.7%                            | 4.5%        | 3.0%        |
| Expected life of options (years)   | 6.25                            | 6.25        | 6.25        |
| Expected annual dividend per share | \$ 0.00                         | \$ 0.00     | \$ 0.00     |

The weighted-average grant-date fair value per share of options granted during 2006, 2007 and 2008 were \$10.20, \$9.45 and \$7.36, respectively.

Prior to becoming a public company, the exercise prices for options granted were set by our board of directors, based on its determination of the fair market value of our common stock at the time of the grants with input from our management. The members of our board of directors have extensive experience in the life sciences industry and all but one are non-employee directors. In connection with the IPO, we performed a retrospective determination of fair value for financial reporting purposes of our common stock underlying stock option grants in 2005, 2006 and through April 2007, utilizing a combination of valuation methods described in the American Institute of Certified Public Accountants *Technical Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, (the Practice Aid). We utilized the same combination of valuation methods to perform contemporaneous valuations of our common stock for each quarter subsequent to March 31, 2006.

These assumptions and methods are more fully described in our Form S-1/A (333-141700) that was declared effective by the SEC in May 2007.

**Basic and Diluted Net Loss Attributable to Common Stockholders per Common Share**

We calculated net loss per share in accordance with SFAS No. 128, *Earnings Per Share*. We have determined that the Series A, B, C, and D redeemable convertible preferred stock represented participating securities in accordance with EITF Issue No. 03-6 *Participating Securities and the Two Class Method under FASB Statement No. 128*. However, because we operate at a loss, and losses are not allocated to the redeemable convertible preferred stock, the two class method does not affect our calculation of earnings per share. We had a net loss for all periods presented; accordingly, the inclusion of common stock options and warrants would be anti-dilutive. Therefore, the weighted average shares used to calculate both basic and diluted earnings per share are the same. As a result of the IPO in May 2007, all outstanding redeemable convertible preferred stock was converted to common stock and were no longer outstanding as of December 31, 2008.

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The following table provides a reconciliation of the numerator and denominator used in computing basic and diluted net loss attributable to common stockholders per common share (in thousands except share amounts):

|  | <b>Years Ended December 31,</b> |             |             |
|--|---------------------------------|-------------|-------------|
|  | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| <b>Historical</b>  |                                 |             |             |
| Numerator:   |                                 |             |             |
| Net loss   | \$ (46,345)                     | \$ (41,167) | \$ (39,355) |
| Deemed dividend  | (19,424)                        |             |             |
| Accretion of redeemable convertible preferred stock          | (159)                           | (351)       |             |
| <br>   |                                 |             |             |
| Net loss attributable to common stockholders                 | \$ (65,928)                     | \$ (41,518) | \$ (39,355) |
| <br>   |                                 |             |             |
| Denominator:   |                                 |             |             |
| Weighted average common shares outstanding basic and diluted | 735,967                         | 13,235,755  | 22,493,803  |

Dilutive common stock equivalents would include the dilutive effect of convertible securities, common stock options and warrants for common stock equivalents. Potentially dilutive common stock equivalents totaled approximately 17.5 million, 24.9 million and 25.7 million for the years ended December 31, 2006, 2007 and 2008, respectively. Potentially dilutive common stock equivalents were excluded from the diluted earnings per share denominator for all periods because of their anti-dilutive effect.

**Results of Operations*****Year Ended December 31, 2008 Compared to Year Ended December 31, 2007***

**Research and Development Expense.** Research and development expense was \$37.8 million in 2008 representing an increase of \$6.7 million or 22% from \$31.1 million in 2007. The variance was primarily attributable to higher personnel costs of \$4.8 million associated with headcount growth, a \$0.7 million increase in research supplies and a \$1.0 million increase in costs for travel and meetings primarily related to clinical studies, partially offset by a reduction in contract research and manufacturing costs due to the timing of studies and manufacturing campaigns of \$0.7 million.

**General and Administrative Expense.** General and administrative expense was \$19.7 million in 2008, an increase of \$4.4 million or 29% from \$15.3 million in 2007. The variance was primarily attributable to higher personnel costs of \$3.8 million associated with headcount growth and \$0.7 million of governance, insurance and compliance costs associated with being a public company, partially offset by a reduction in legal costs reflective of legal expenses associated with the collaboration agreement with Shire.

**Depreciation and Amortization.** Depreciation and amortization expense was \$1.5 million in 2008, an increase of \$0.3 million or 25%, from \$1.2 million in 2007 due to assets acquired in 2008.

**Interest Income and Interest Expense.** Interest income was \$4.8 million in 2008, compared to \$5.1 million in 2007. The decrease of \$0.3 million or 6% was due to lower average cash and cash equivalents balances and the decline in interest rates. Interest expense was \$0.2 million in 2008, compared to \$0.3 million in 2007. The decrease of \$0.1 million or 38% was due to the decrease in capital lease borrowings.

***Year Ended December 31, 2007 Compared to Year Ended December 31, 2006***

**Research and Development Expense.** Research and development expense was \$31.1 million in 2007 representing a decrease of \$2.5 million or 7% from \$33.6 million in 2006. The variance was primarily attributable to a reduction in contract research and manufacturing costs due to the timing of studies of \$4.5 million, partially offset by higher personnel costs of \$1.6 million associated with headcount growth.

*General and Administrative Expense.* General and administrative expense was \$15.3 million in 2007, an increase of \$3.0 million or 24% from \$12.3 million in 2006. The variance was primarily attributable to higher personnel costs of \$2.0 million associated with headcount growth and higher professional fees of \$0.3 million related primarily to finalizing the collaboration agreement with Shire.

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*Depreciation and Amortization.* Depreciation and amortization expense was \$1.2 million in 2007, an increase of \$0.2 million or 20%, from \$1.0 million in 2006. The increase is primarily due to assets acquired in the first nine months of 2007.

*Interest Income and Interest Expense.* Interest income was \$5.1 million in 2007, compared to \$2.0 million in 2006. The increase of \$3.1 million or 155% was due to higher average cash and cash equivalents balances as a result of the issuance of the Series D redeemable convertible preferred stock, the \$68.1 million of proceeds from the IPO and the receipt of the \$50 million upfront licensing payment from Shire. Interest expense was \$0.3 million in 2007, compared to \$0.3 million in 2006.

**Liquidity and Capital Resources****Source of Liquidity**

As a result of our significant research and development expenditures and the lack of any approved products to generate product sales revenue, we have not been profitable and have generated operating losses since we were incorporated in 2002. We have funded our operations principally with \$148.7 million of proceeds from redeemable convertible preferred stock offerings, \$75.0 million of gross proceeds from our IPO in June 2007 and \$50.0 million from the non-refundable license fee from the Shire collaboration agreement in November 2007. The following table summarizes our significant funding sources as of December 31, 2008:

| <b>Funding</b> <sup>(2)</sup>                   | <b>Year</b>            | <b>No. Shares</b> | <b>Approximate<br/>Amount</b> <sup>(1)</sup><br><b>(in<br/>thousands)</b> |
|---|------------------------|-------------------|---|
| Series A Redeemable Convertible Preferred Stock | 2002                   | 444,443           | \$ 2,500  |
| Series B Redeemable Convertible Preferred Stock | 2004, 2005, 2006, 2007 | 4,917,853         | 31,189  |
| Series C Redeemable Convertible Preferred Stock | 2005, 2006             | 5,820,020         | 54,999  |
| Series D Redeemable Convertible Preferred Stock | 2006, 2007             | 4,930,405         | 60,000  |
| Common Stock                                    | 2007                   | 5,000,000         | 75,000  |
| Upfront License Fee from Shire                  | 2007                   |                   | 50,000  |
|   |                        | 21,112,721        | \$ 273,688  |

(1) Represents gross proceeds.

(2) The Series A, B, C and D Redeemable Convertible Preferred Stock was converted to common stock upon the effectiveness of our IPO.

In addition, in conjunction with the Shire collaboration agreement, we received reimbursement of research and development expenditures from the date of the agreement (November 7, 2007) through year-end 2008 of \$14.5 million.

As of December 31, 2008, we had cash and cash equivalents and marketable securities of \$121.1 million. We invest cash in excess of our immediate requirements with regard to liquidity and capital preservation in a variety of interest-bearing instruments, including obligations of U.S. government agencies and money market accounts. Wherever possible, we seek to minimize the potential effects of concentration and degrees of risk. Although we maintain cash balances with financial institutions in excess of insured limits, we do not anticipate any losses with respect to such cash balances.

***Net Cash Used in and Provided by Operating Activities***

Net cash used by operations for the year ended December 31, 2008 was \$36.9 million due primarily to the net loss for the year ended December 31, 2008 of \$39.3 million and the change in operating assets and liabilities of \$5.5 million. The change in operating assets and liabilities of \$5.5 million was due primarily to deferred revenue related to the collaboration agreement with Shire and lower accounts payable and accrued expenses at year-end 2008.

Net cash provided by operations for the year ended December 31, 2007 was \$15.2 million due primarily to the change in operating assets and liabilities of \$51.0 million and the change in fair value of warrant liability of \$0.2 million, offset by the net loss for the year ended December 31, 2007 of \$41.2 million. The change in operating assets and liabilities of \$51.0 million was due primarily to deferred revenue related to the \$50 million upfront licensing payment from Shire.

***Net Cash Provided by and Used in Investing Activities***

Net cash provided by investing activities for the year ended December 31, 2008 was \$21.7 million. Net cash provided by investing activities reflects \$178.1 million for the sale and redemption of marketable securities, offset by \$153.7 million for the purchase of marketable securities and \$2.7 million for the acquisition of property and equipment.

Net cash used in investing activities for the year ended December 31, 2007 was \$75.0 million. Net cash used in investing activities reflects \$200.7 million for the purchase of marketable securities and \$0.7 million for the acquisition of property and equipment, offset by \$126.4 million for the sale and redemption of marketable securities.

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***Net Cash Used in and Provided by Financing Activities***

Net cash used in financing activities for the year ended December 31, 2008 was \$1.0 million, consisting primarily of payments of equipment debt financing obligations of \$1.5 million offset by \$0.5 million proceeds from exercise of stock options and warrants.

Net cash provided by financing activities for the year ended December 31, 2007 was \$91.9 million, consisting primarily of \$24.1 million from the issuance of Series D redeemable convertible preferred stock, \$68.1 million from the issuance of common stock, \$0.5 million from asset financing arrangements, and \$0.6 million proceeds from exercise of stock options and warrants offset by payments of equipment debt financing obligations of \$1.4 million.

***Funding Requirements***

We expect to incur losses from operations for the foreseeable future primarily due to increasing research and development expenses, including expenses related to the hiring of personnel and additional clinical trials, and greater general and administrative expenses resulting from expanding our finance and administrative staff, adding infrastructure, and incurring additional costs related to being a public company. Our future capital requirements will depend on a number of factors, including:

the progress and results of our clinical trials of Amigal, Plicera and AT2220;

the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates;

our achievement of milestone payments under our collaboration agreement with Shire;

the costs, timing and outcome of regulatory review of our product candidates;

the number and development requirements of other product candidates that we pursue;

the costs of commercialization activities, including product marketing, sales and distribution;

the emergence of competing technologies and other adverse market developments;

the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;

the extent to which we acquire or invest in businesses, products and technologies; and

our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

We do not anticipate that we will generate revenue from commercial sales for at least the next several years, if at all. In the absence of additional funding, we expect our continuing operating losses to result in increases in our cash used in operations over the next several quarters and years. However, we believe that our existing cash and cash equivalents and short-term investments, together with the expected reimbursement of research and development expenses, excluding research milestones, from our collaboration with Shire, will be sufficient to enable us to fund our operating expenses and capital expenditure requirements at least until 2011.

***Financial Uncertainties Related to Potential Future Payments***

***Milestone Payments***

We have acquired rights to develop and commercialize our product candidates through licenses granted by various parties. While our license agreements for Amigal and AT2220 do not contain milestone payment obligations, two of these agreements related to Plicera do require us to make such payments if certain specified pre-commercialization events occur. Upon the satisfaction of certain milestones and assuming successful development of Plicera, we may be obligated, under the agreements that we have in place, to make future milestone payments aggregating up to

approximately \$7.9 million. However, such potential milestone payments are subject to many uncertain variables that would cause such payments, if any, to vary in size.

The events that trigger these payments include:

- completion of Phase 2 clinical trials;
- commencement of Phase 3 clinical trials;
- submission of a new drug application (NDA) to the FDA or foreign equivalents; and
- receipt of marketing approval from the FDA or foreign equivalents.



**Table of Contents***Royalties*

Under our license agreements, if we owe royalties on net sales for one of our products to more than one licensor, then we have the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, we will owe royalties only to Mt. Sinai School of Medicine (MSSM). We expect to pay royalties to all three licensors with respect to Plicera. To date, we have not made any royalty payments on sales of our products and believe we are several years away from selling any products that would require us to make any such royalty payments.

On October 31, 2008, we amended and restated its license agreement with MSSM. The amended and restated agreement consolidated previous amendments into a single agreement, clarified the portion of royalties and milestone payments that we receive from Shire that are payable to MSSM, and provided us with the sole right to control the prosecution of patent rights described in the amended and restated license agreement. Under the terms of the amended and restated license agreement, we agreed to pay MSSM \$2.6 million in connection with the \$50 million upfront payment that we received in November 2007, which was already accrued for at year-end 2007, and an additional \$2.6 million for the sole right to and control over the prosecution of patent rights.

Whether we will be obligated to make milestone or royalty payments in the future is subject to the success of our product development efforts and, accordingly, is inherently uncertain.

**Contractual Obligations**

The following table summarizes our significant contractual obligations and commercial commitments at December 31, 2008 and the effects such obligations are expected to have on our liquidity and cash flows in future periods (in thousands).

|  | <b>Total</b> | <b>Less than<br/>1 Year</b> | <b>1-3<br/>Years</b> | <b>3-5<br/>Years</b> | <b>Over 5<br/>Years</b> |
|--|--------------|-----------------------------|----------------------|----------------------|-------------------------|
| Operating lease obligations                | \$ 6,162     | \$ 2,145                    | \$ 4,017             |                      |                         |
| Capital lease obligations                  | 1,294        | 957                         | 337                  |                      |                         |
| Employment agreement                       | 2,940        | 2,199                       | 741                  |                      |                         |
| <br>                                       |              |                             |                      |                      |                         |
| Total fixed contractual obligations<br>(1) | \$ 10,396    | \$ 5,301                    | \$ 5,095             |                      |                         |

- (1) This table does not include
- (a) any milestone payments which may become payable to third parties under license agreements as the timing and likelihood of such payments are not known,
  - (b) any royalty

payments to third parties as the amounts of such payments, timing and/or the likelihood of such payments are not known, (c) amounts, if any, that may be committed in the future to construct additional facilities, and (d) contracts that are entered into in the ordinary course of business which are not material in the aggregate in any period presented above.

We lease office and laboratory space in Cranbury, New Jersey. One of these leases will expire by its terms in August 2009 and the other two subleases expire in February 2012. In 2008, we leased office and laboratory space in San Diego, CA and this lease will expire by its terms in September 2011.

In August 2002, we entered into capital lease agreements that provide for up to \$1 million of equipment financing through August 2004. The facility was increased to \$3 million in May 2005 and to \$5 million in November 2005. These financing arrangements include interest of approximately 9-12%, and lease terms of 36 or 48 months. Eligible assets under the lease lines include laboratory and scientific equipment, computer hardware and software, general office equipment, furniture and leasehold improvements. Upon termination of the lease agreements, we may renew the lease or purchase the leased equipment for \$1.00. We also have the option to purchase the equipment at set prices before termination of the lease. The funding period of the facility expired by its own term in 2007.

On April 28, 2006, we entered into an employment agreement with our president and chief executive officer that provides for an annual base salary, a cash bonus of up to 50% of base salary, an executive medical reimbursement contract, annual reimbursement up to \$220,000 for medical expenses not covered by the executive medical reimbursement contract or our medical or health insurance policies, and gross up for federal and state income taxes of income tax incurred in connection with medical reimbursement. The agreement will continue for successive one-year terms until either party provides written notice of termination to the other in accordance with the terms of the agreement. The table above includes costs associated with the remainder of the third one-year term and fourth one-year term ending April 28, 2010. The cost of the executive medical reimbursement contract is estimated based on current premiums.

We have entered into agreements with clinical research organizations and other outside contractors who will be partially responsible for conducting and monitoring our clinical trials for Amigal, Plicera and AT2220. These contractual obligations are not reflected in the table above because we may terminate them without penalty.

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Except for the Shire collaboration agreement described above, we have no other lines of credit or other committed sources of capital. To the extent our capital resources are insufficient to meet future capital requirements, we will need to raise additional capital or incur indebtedness to fund our operations. We cannot assure you that additional debt or equity financing will be available on acceptable terms, if at all.

**Off-Balance Sheet Arrangements**

We had no off-balance sheet arrangements as of December 31, 2007 and 2008.

**Recent Accounting Pronouncements**

In May 2008, the FASB issued FASB Staff Position (FSP) No. 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)*, which specifies that issuers of these instruments should separately account for the liability and equity components in a manner that reflects the entity's nonconvertible debt borrowing rate when interest cost is recognized in subsequent periods. FSP No. 14-1 is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. FSP No. 14-1 is also to be applied retrospectively to all periods presented except if these instruments were not outstanding during any of the periods that are presented in the annual financial statements for the period of adoption but were outstanding during an earlier period. We do not expect that this will have a significant impact on the financial statements of the Company.

In December 2007, the EITF of the FASB reached a consensus on Issue No. 07-1, *Accounting for Collaborative Arrangements* (EITF 07-1). The EITF concluded on the definition of a collaborative arrangement and that revenues and costs incurred with third parties in connection with collaborative arrangements would be presented gross or net based on the criteria in EITF 99-19 and other accounting literature. Based on the nature of the arrangement, payments to or from collaborators would be evaluated and its terms, the nature of the entity's business, and whether those payments are within the scope of other accounting literature would be presented. Companies are also required to disclose the nature and purpose of collaborative arrangements along with the accounting policies and the classification and amounts of significant financial-statement amounts related to the arrangements. Activities in the arrangement conducted in a separate legal entity should be accounted for under other accounting literature; however required disclosure under EITF 07-1 applies to the entire collaborative agreement. This Issue is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years, and is to be applied retrospectively to all periods presented for all collaborative arrangements existing as of the effective date. We do not expect that this will have a significant impact on our financial statements.

In December 2007, the FASB issued SFAS No. 141(R), *Business Combinations* (SFAS No. 141(R)), which replaces SFAS No. 141, *Business Combinations*, requires an acquirer to recognize the assets acquired, the liabilities assumed, and any non-controlling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This Statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the non-controlling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this Statement. This Statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. We do not expect that this will have a significant impact on our financial statements.

In December 2007, FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements* (SFAS No. 160), which amends Accounting Research Bulletin No. 51, *Consolidated Financial Statements*, to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. SFAS No. 160 establishes accounting and reporting standards that require the ownership interests in subsidiaries not held by the parent to be clearly identified, labeled and presented in the consolidated statement of financial position within equity, but separate from the parent's equity. This statement also requires the amount of consolidated net income attributable to the parent and to the non-controlling interest to be clearly identified and presented on the face of the consolidated statement of income. Changes in a parent's ownership interest while the parent retains its controlling financial interest must be accounted for consistently, and when a subsidiary is deconsolidated, any retained non-controlling equity investment in the former subsidiary must be initially

measured at fair value. The gain or loss on the deconsolidation of the subsidiary is measured using the fair value of any non-controlling equity investment. The Statement also requires entities to provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the non-controlling owners. This Statement applies prospectively to all entities that prepare consolidated financial statements and applies prospectively for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. We do not expect that this will have a significant impact on our financial statements.

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In June 2007, the EITF of the FASB reached a consensus on Issue No. 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities* (EITF 07-3). EITF 07-3 requires that non-refundable advance payments for goods or services that will be used or rendered for future research and development activities should be deferred and capitalized. As the related goods are delivered or the services are performed, or when the goods or services are no longer expected to be provided, the deferred amounts would be recognized as an expense. This Issue is effective for financial statements issued for fiscal years beginning after December 15, 2007 and earlier application is not permitted. This consensus is to be applied prospectively for new contracts entered into on or after the effective date. The pronouncement did not have a material effect on our financial statements.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an amendment of FASB Statement No. 115* (SFAS No. 159), which is effective for fiscal years beginning after November 15, 2007. SFAS No. 159 permits the Company to choose to measure many financial instruments and certain other items at fair value. The objective is to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions. SFAS No. 159 is expected to expand the use of fair value measurement, which is consistent with the FASB's long-term measurement objectives for accounting for financial instruments. SFAS No. 159 is effective for fiscal year 2008 but early adoption is permitted. The pronouncement did not have a material effect on our financial statements.

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

The recent and precipitous decline in the market value of certain securities backed by residential mortgage loans has led to a large liquidity crisis affecting the broader U.S. housing market, the financial services industry and global financial markets. Investors holding many of these and related securities have experienced substantial decreases in asset valuations and uncertain secondary market liquidity. Furthermore, credit rating authorities have, in many cases, been slow to respond to the rapid changes in the underlying value of certain securities and pervasive market illiquidity, regarding these securities.

As a result, this credit crisis may have a potential impact on the determination of the fair value of financial instruments or possibly require impairments in the future should the value of certain investments suffer a decline in value which is determined to be other than temporary.

Consistent with our investment policy, we do not use derivative financial instruments in our investment portfolio. We regularly invest excess operating cash in deposits with major financial institutions, money market funds, notes issued by the U.S. government, as well as fixed income investments and U.S. bond funds both of which can be readily purchased and sold using established markets. We believe that the market risk arising from our holdings of these financial instruments is minimal. We currently do not believe that any change in the market value of fixed income investments in our portfolio is material, nor does it warrant a determination that there was any other than temporary impairment.

We do not have exposure to market risks associated with changes in interest rates, as we have no variable interest rate debt outstanding. Although we do not believe we have any material exposure to market risks associated with interest rates, we may experience reinvestment risk as fixed income securities mature and are reinvested in securities bearing lower interest rates.

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**Management's Report on Consolidated Financial Statements and Internal Control over Financial Reporting**

The management of Amicus Therapeutics, Inc. has prepared, and is responsible for the Company's consolidated financial statements and related footnotes. These consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles.

We are responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of the Company's principal executive and principal financial officers and effected by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of Amicus Therapeutics, Inc.;

provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of Amicus Therapeutics, Inc. are being made only in accordance with authorizations of management and directors of Amicus Therapeutics, Inc.; and

provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the assets of Amicus Therapeutics, Inc. that could have a material effect on the financial statements.

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

We assessed the effectiveness of our internal control over financial reporting as of December 31, 2008. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on our assessment we believe that, as of December 31, 2008, our internal control over financial reporting is effective based on those criteria.

Dated February 4, 2009

/s/ John F. Crowley

/s/ James E. Dentzer

President and Chief Executive Officer

Chief Financial Officer

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**Report of Independent Registered Public Accounting Firm**

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

We have audited the accompanying consolidated balance sheets of Amicus Therapeutics, Inc. and subsidiary (a development stage company) as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity (deficiency) and cash flows for each of the three years in the period ended December 31, 2008 and the period February 4, 2002 (inception) to December 31, 2008. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Amicus Therapeutics, Inc. and subsidiary at December 31, 2008 and 2007, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2008, and the period February 4, 2002 (inception) to December 31, 2008, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

MetroPark, New Jersey  
February 4, 2009

**Table of Contents****Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.****Amicus Therapeutics, Inc.  
(a development stage company)****Consolidated Balance Sheets  
(in thousands, except share and per share amounts)**

|   | <b>December 31,</b> |                   |
|---|---------------------|-------------------|
|   | <b>2007</b>         | <b>2008</b>       |
| <b>Assets:</b>  |                     |                   |
| Current assets:   |                     |                   |
| Cash and cash equivalents   | \$ 44,188           | \$ 28,073         |
| Investments in marketable securities  | 117,339             | 93,051            |
| Prepaid expenses and other current assets   | 1,513               | 2,463             |
| Total current assets  | 163,040             | 123,587           |
| Property and equipment, less accumulated depreciation and amortization of \$2,793 and \$4,260 at December 31, 2007 and 2008, respectively   | 3,790               | 4,919             |
| Other non-current assets  | 267                 | 267               |
| <b>Total Assets</b>   | <b>\$ 167,097</b>   | <b>\$ 128,773</b> |
| <b>Liabilities and Stockholders Equity</b>  |                     |                   |
| Current liabilities:  |                     |                   |
| Accounts payable and accrued expenses   | \$ 10,465           | \$ 8,796          |
| Current portion of capital lease obligations  | 1,527               | 877               |
| Current portion of deferred revenue   | 3,801               | 3,705             |
| Total current liabilities   | 15,793              | 13,378            |
| Deferred revenue, less current portion  | 46,813              | 44,035            |
| Capital lease obligations, less current portion   | 1,194               | 317               |
| Commitments and contingencies   |                     |                   |
| Stockholders equity:  |                     |                   |
| Common stock, \$.01 par value, 50,000,000 shares authorized, 22,408,731 shares issued and outstanding at December 31, 2007, 50,000,000 shares authorized, 22,634,711 shares issued and outstanding at December 31, 2008 | 285                 | 287               |
| Additional paid-in capital  | 227,438             | 234,412           |
| Accumulated other comprehensive income  | 408                 | 533               |
| Deficit accumulated during the development stage  | (124,834)           | (164,189)         |
| Total stockholders equity   | 103,297             | 71,043            |
| <b>Total Liabilities and Stockholders Equity</b>  | <b>\$ 167,097</b>   | <b>\$ 128,773</b> |

*See accompanying notes to consolidated financial statements*





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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Operations**  
**(in thousands, except share and per share amounts)**

|  | Years Ended December 31, |             |             | Period from  |
|--|--------------------------|-------------|-------------|--|
|  | 2006                     | 2007        | 2008        | February 4,<br>2002<br>(Inception) to<br>December<br>31,<br>2008 |
| Revenue:                                     |                          |             |             |  |
| Research revenue                             | \$                       | \$ 1,375    | \$ 12,189   | \$ 13,564  |
| Collaboration revenue                        |                          | 409         | 2,778       | 3,187  |
| Total revenue                                |                          | 1,784       | 14,967      | 16,751   |
| Operating Expenses:                          |                          |             |             |  |
| Research and development                     | 33,630                   | 31,074      | 37,764      | 127,642  |
| General and administrative                   | 12,277                   | 15,278      | 19,666      | 57,736   |
| Impairment of leasehold improvements         |                          |             |             | 1,030  |
| Depreciation and amortization                | 952                      | 1,237       | 1,493       | 4,287  |
| In-process research and development          |                          |             |             | 418  |
| Total operating expenses                     | 46,859                   | 47,589      | 58,923      | 191,113  |
| Loss from operations                         | (46,859)                 | (45,805)    | (43,956)    | (174,362)  |
| Other income (expenses):                     |                          |             |             |  |
| Interest income                              | 1,990                    | 5,135       | 4,819       | 12,760   |
| Interest expense                             | (273)                    | (348)       | (218)       | (1,648)  |
| Change in fair value of warrant liability    | (23)                     | (149)       |             | (454)  |
| Other expense                                | (1,180)                  |             |             | (1,180)  |
| Loss before income tax benefit               | (46,345)                 | (41,167)    | (39,355)    | (164,884)  |
| Income tax benefit                           |                          |             |             | 695  |
| Net loss                                     | (46,345)                 | (41,167)    | (39,355)    | (164,189)  |
| Deemed dividend                              | (19,424)                 |             |             | (19,424)   |
| Preferred stock accretion                    | (159)                    | (351)       |             | (802)  |
| Net loss attributable to common stockholders | \$ (65,928)              | \$ (41,518) | \$ (39,355) | \$ (184,415)   |

|  |            |            |            |
|--|------------|------------|------------|
| Net loss attributable to common stockholders<br>per common share basic and diluted | \$ (89.58) | \$ (3.14)  | \$ (1.75)  |
| Weighted-average common shares outstanding<br>basic and diluted                    | 735,967    | 13,235,755 | 22,493,803 |

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Changes in Stockholders (Deficiency)/Equity**  
**Period from February 4, 2002 (inception) to December 31, 2002,**  
**and the six year period ended December 31, 2008**  
**(in thousands, except share amounts)**

|  | Common Stock |        | Additional | Other           | Deferred     | Deficit     | Total        |
|--|--------------|--------|------------|-----------------|--------------|-------------|--------------|
|  | Shares       | Amount | Paid-In    | Comprehensive   | Compensation | Accumulated | Stockholders |
|  |              |        | Capital    | Gain/<br>(Loss) |              | During the  | (Deficiency) |
|  |              |        |            |                 |              | Development | Equity       |
|  |              |        |            |                 |              | Stage       |              |
| Balance at<br>February 4, 2002<br>(inception)                |              | \$     | \$         | \$              | \$           | \$          | \$           |
| Issuance of common<br>stock to a consultant                  | 74,938       | 6      | 78         |                 |              |             | 84           |
| Stock issued for<br>in-process research<br>and development   | 232,266      | 17     | 401        |                 |              |             | 418          |
| Deferred<br>compensation                                     |              |        | 209        |                 | (209)        |             |              |
| Amortization of<br>deferred<br>compensation                  |              |        |            |                 | 27           |             | 27           |
| Issuance of warrants<br>with financing<br>arrangements       |              |        | 8          |                 |              |             | 8            |
| Accretion of<br>redeemable<br>convertible preferred<br>stock |              |        | (11)       |                 |              |             | (11)         |
| Net loss   |              |        |            |                 |              | (1,775)     | (1,775)      |
| Balance at<br>December 31, 2002                              | 307,204      | 23     | 685        |                 | (182)        | (1,775)     | (1,249)      |
| Stock issued from<br>exercise of stock<br>options            | 333          |        |            |                 |              |             |              |
| Deferred<br>compensation                                     |              |        | 14         |                 | (14)         |             |              |
| Amortization of<br>deferred<br>compensation                  |              |        |            |                 | 70           |             | 70           |
| Issuance of stock<br>warrants with                           |              |        | 210        |                 |              |             | 210          |

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|  |         |    |       |     |         |          |          |
|--|---------|----|-------|-----|---------|----------|----------|
| convertible notes  |         |    |       |     |         |          |          |
| Issuance of stock options to consultants                                     |         |    | 4     |     |         |          | 4        |
| Accretion of redeemable convertible preferred stock                          |         |    | (17)  |     |         |          | (17)     |
| Beneficial conversion feature related to bridge financing                    |         |    | 41    |     |         |          | 41       |
| Net loss   |         |    |       |     |         | (6,768)  | (6,768)  |
| Balance at December 31, 2003   | 307,537 | 23 | 937   |     | (126)   | (8,543)  | (7,709)  |
| Deferred compensation  |         |    | 68    |     | (68)    |          |          |
| Amortization of deferred compensation  |         |    |       |     | 60      |          | 60       |
| Issuance of stock options to consultants                                     |         |    | 16    |     |         |          | 16       |
| Accretion of redeemable convertible preferred stock                          |         |    | (126) |     |         |          | (126)    |
| Interest waived on converted convertible notes                               |         |    | 193   |     |         |          | 193      |
| Beneficial conversion feature related to bridge financing                    |         |    | 95    |     |         |          | 95       |
| Comprehensive Loss: Unrealized holding loss on available-for-sale securities |         |    |       |     | (9)     |          | (9)      |
| Net loss   |         |    |       |     |         | (8,807)  | (8,807)  |
| Net total comprehensive loss   |         |    |       |     |         |          | (8,816)  |
| Balance at December 31, 2004   | 307,537 | 23 | 1,183 | (9) | (134)   | (17,350) | (16,287) |
| Stock issued from exercise of stock options                                  | 97,156  | 7  | 17    |     |         |          | 24       |
| Stock issued from exercise of warrants                                       | 133,332 | 10 | 65    |     |         |          | 75       |
|  |         |    | 2,778 |     | (2,778) |          |          |

|  |         |       |       |      |         |          |          |
|--|---------|-------|-------|------|---------|----------|----------|
| Deferred compensation  |         |       |       |      |         |          |          |
| Amortization of deferred compensation  |         |       |       |      | 365     |          | 365      |
| Non-cash charge for stock options to consultants                             |         | 112   |       |      |         |          | 112      |
| Accretion of redeemable convertible preferred stock                          |         | (139) |       |      |         |          | (139)    |
| Comprehensive Loss: Unrealized holding loss on available-for-sale securities |         |       |       | (7)  |         |          | (7)      |
| Net loss   |         |       |       |      |         | (19,972) | (19,972) |
| Net total comprehensive loss   |         |       |       |      |         |          | (19,979) |
| Balance at December 31, 2005   | 538,025 | 40    | 4,016 | (16) | (2,547) | (37,322) | (35,829) |

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Changes in Stockholders (Deficiency) Equity**  
**Period from February 4, 2002 (inception) to December 31, 2002,**  
**and the six year period ended December 31, 2008**  
**(in thousands, except share amounts)**

|  | <b>Common Stock</b> |               | <b>Additional<br/>Paid-In Capital</b> | <b>Other<br/>Comprehensive<br/>Gain/<br/>(Loss)</b> | <b>Deferred<br/>Compensation</b> | <b>Deficit<br/>Accumulated<br/>During the<br/>Development<br/>Stage</b> | <b>Total<br/>Stockholders<br/>(Deficiency)<br/>Equity</b> |
|--|---------------------|---------------|---------------------------------------|---|----------------------------------|---|---|
|  | <b>Shares</b>       | <b>Amount</b> | <b>Capital</b>                        | <b>(Loss)</b>                                       | <b>Compensation</b>              | <b>Stage</b>  | <b>Equity</b>   |
| Balance at<br>December 31, 2005  | 538,025             | 40            | 4,016                                 | (16)  | (2,547)                          | (37,322)  | (35,829)  |
| Stock issued from<br>exercise of options   | 265,801             | 20            | 138                                   |   |                                  |   | 158   |
| Stock issued for<br>license payment  | 133,333             | 10            | 1,210                                 |   |                                  |   | 1,220   |
| Reversal of deferred<br>compensation upon<br>adoption of FAS<br>123(R)   |                     |               | (2,547)                               |   | 2,547                            |   |   |
| Stock-based<br>compensation  | 53,333              |               | 2,816                                 |   |                                  |   | 2,816   |
| Issuance of stock<br>options to<br>consultants   |                     |               | 476                                   |   |                                  |   | 476   |
| Accretion of<br>redeemable<br>convertible preferred<br>stock   |                     |               | (159)                                 |   |                                  |   | (159)   |
| Reclassification of<br>warrant liability upon<br>exercise of Series B<br>redeemable<br>convertible preferred<br>stock warrants |                     |               | 117                                   |   |                                  |   | 117   |
| Beneficial<br>conversion on<br>issuance of Series C<br>redeemable<br>convertible preferred<br>stock                            |                     |               | 19,424                                |   |                                  |   | 19,424  |
| Beneficial<br>conversion charge<br>(deemed dividend)<br>on issuance of   |                     |               | (19,424)                              |   |                                  |   | (19,424)  |

|  |            |     |         |     |           |          |
|--|------------|-----|---------|-----|-----------|----------|
| Series C redeemable convertible preferred stock          |            |     |         |     |           |          |
| Comprehensive (Loss)/ Income:                            |            |     |         |     |           |          |
| Unrealized holding gain on available-for-sale securities |            |     |         | 31  |           | 31       |
| Net loss   |            |     |         |     | (46,345)  | (46,345) |
| Net total comprehensive loss                             |            |     |         |     |           | (46,314) |
| Balance at December 31, 2006                             | 990,492    | 70  | 6,067   | 15  | (83,667)  | (77,515) |
| Stock issued from initial public offering                | 5,000,000  | 50  | 68,095  |     |           | 68,145   |
| Stock issued from conversion of preferred shares         | 16,112,721 | 162 | 148,429 |     |           | 148,591  |
| Stock issued from exercise of stock options, net         | 305,518    | 3   | 455     |     |           | 458      |
| Stock based compensation                                 |            |     | 3,823   |     |           | 3,823    |
| Issuance of stock options to consultants                 |            |     | 162     |     |           | 162      |
| Accretion of redeemable convertible preferred stock      |            |     | (351)   |     |           | (351)    |
| Charge for warrant liability                             |            |     | 758     |     |           | 758      |
| Comprehensive (Loss)/ Income:                            |            |     |         |     |           |          |
| Unrealized holding gain on available-for-sale securities |            |     |         | 393 |           | 393      |
| Net loss   |            |     |         |     | (41,167)  | (41,167) |
| Net total comprehensive loss                             |            |     |         |     |           | (40,774) |
| Balance at December 31, 2007                             | 22,408,731 | 285 | 227,438 | 408 | (124,834) | 103,297  |
|  | 225,980    | 2   | 528     |     |           | 530      |



|  |            |        |            |        |    |              |           |
|--|------------|--------|------------|--------|----|--------------|-----------|
| Stock issued from exercise of stock options, net         |            |        |            |        |    |              |           |
| Stock based compensation                                 |            |        | 6,446      |        |    |              | 6,446     |
| Comprehensive (Loss)/ Income:                            |            |        |            |        |    |              |           |
| Unrealized holding gain on available-for-sale securities |            |        |            | 125    |    |              | 125       |
| Net loss   |            |        |            |        |    | (39,355)     | (39,355)  |
| Net total comprehensive loss                             |            |        |            |        |    |              | (39,230)  |
| Balance at December 31, 2008                             | 22,634,711 | \$ 287 | \$ 234,412 | \$ 533 | \$ | \$ (164,189) | \$ 71,043 |

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Consolidated Statements of Cash Flows**  
**(in thousands)**

|  | <b>Years Ended December 31,</b> |             |             | <b>Period from</b>    |
|--|---------------------------------|-------------|-------------|-----------------------|
|  | <b>2006</b>                     | <b>2007</b> | <b>2008</b> | <b>February 4,</b>    |
|  |                                 |             |             | <b>2002</b>           |
|  |                                 |             |             | <b>(Inception) to</b> |
|  |                                 |             |             | <b>December 31,</b>   |
|  |                                 |             |             | <b>2008</b>           |
| <b>Operating activities</b>  |                                 |             |             |                       |
| Net loss   | \$ (46,345)                     | \$ (41,167) | \$ (39,355) | \$ (164,189)          |
| Adjustments to reconcile net loss to net cash<br>(used in)/provided by operating activities: |                                 |             |             |                       |
| Non-cash interest expense  |                                 |             |             | 525                   |
| Depreciation and amortization  | 952                             | 1,237       | 1,493       | 4,285                 |
| Amortization of non-cash compensation  |                                 |             |             | 522                   |
| Stock-based compensation   | 2,816                           | 3,823       | 6,446       | 13,085                |
| Non-cash charge for stock based compensation<br>issued to consultants                        | 475                             | 162         |             | 853                   |
| Change in fair value of warrant liability  | 22                              | 149         |             | 454                   |
| Loss on disposal of asset  |                                 |             | 44          | 44                    |
| Stock-based license payment  | 1,220                           |             |             | 1,220                 |
| Impairment of leasehold improvements   |                                 |             |             | 1,030                 |
| Non-cash charge for in process research and<br>development                                   |                                 |             |             | 418                   |
| Beneficial conversion feature related to bridge<br>financing                                 |                                 |             |             | 135                   |
| Changes in operating assets and liabilities:   |                                 |             |             |                       |
| Prepaid expenses and other current assets  | 120                             | (1,192)     | (949)       | (2,463)               |
| Other non-current assets   | 265                             |             |             | (288)                 |
| Account payable and accrued expenses   | 6,586                           | 1,566       | (1,669)     | 8,796                 |
| Deferred revenue   |                                 | 50,614      | (2,873)     | 47,741                |
| Net cash (used in)/provided by operating<br>activities                                       | (33,889)                        | 15,192      | (36,863)    | (87,832)              |
| <b>Investing activities</b>  |                                 |             |             |                       |
| Sale and redemption of marketable securities   | 37,441                          | 126,370     | 178,100     | 347,166               |
| Purchases of marketable securities   | (62,013)                        | (200,743)   | (153,687)   | (439,801)             |
| Purchases of property and equipment  | (2,031)                         | (669)       | (2,667)     | (10,278)              |
| Net cash (used in)/provided by investing<br>activities                                       | (26,603)                        | (75,042)    | 21,746      | (102,913)             |
| <b>Financing activities</b>  |                                 |             |             |                       |
|  | 63,371                          | 24,053      |             | 143,022               |

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|  |           |           |           |           |
|--|-----------|-----------|-----------|-----------|
| Proceeds from the issuance of preferred stock, net of issuance costs |           |           |           |           |
| Proceeds from issuance of common stock, net of issuance costs        |           | 68,093    |           | 68,093    |
| Proceeds from the issuance of convertible notes                      |           |           |           | 5,000     |
| Payments of capital lease obligations                                | (881)     | (1,388)   | (1,528)   | (4,393)   |
| Payments from exercise of stock options                              | 158       | 510       | 530       | 1,221     |
| Proceeds from exercise of warrants (common and preferred)            | 91        | 97        |           | 264       |
| Proceeds from capital asset financing arrangement                    | 3,431     | 546       |           | 5,611     |
| <br>   |           |           |           |           |
| Net cash provided by/(used in) financing activities                  | 66,170    | 91,911    | (998)     | 218,818   |
| <br>   |           |           |           |           |
| Net increase/(decrease) in cash and cash equivalents                 | 5,678     | 32,061    | (16,115)  | 28,073    |
| Cash and cash equivalents at beginning of year/period                | 6,449     | 12,127    | 44,188    |           |
| <br>   |           |           |           |           |
| Cash and cash equivalents at end of year/period                      | \$ 12,127 | \$ 44,188 | \$ 28,073 | \$ 28,073 |

**Supplemental disclosures of cash flow information**

|   |           |            |        |           |
|---|-----------|------------|--------|-----------|
| Cash paid during the period for interest  | \$ 273    | \$ 348     | \$ 218 | \$ 1,354  |
| <b>Non-cash activities</b>  |           |            |        |           |
| Conversion of preferred stock to common stock   | \$        | \$ 148,591 | \$     | 148,951   |
| Conversion of notes payable to Series B redeemable convertible preferred stock  | \$        | \$         | \$     | \$ 5,000  |
| Accretion of redeemable convertible preferred stock   | \$ 159    | \$ 351     | \$     | \$ 802    |
| Beneficial conversion feature related to issuance of the additional issuance of Series C redeemable convertible preferred stock | \$ 19,424 | \$         | \$     | \$ 19,424 |

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements**

**1. Description of Business**

***Corporate Information, Status of Operations, and Management Plans***

Amicus Therapeutics, Inc. (the Company) was incorporated on February 4, 2002 in Delaware for the purpose of creating a premier drug development company at the forefront of therapy for human genetic diseases initially based on intellectual property in-licensed from Mount Sinai School of Medicine. The Company's activities since inception have consisted principally of raising capital, establishing facilities, and performing research and development. Accordingly, the Company is considered to be in the development stage.

In November 2007, the Company entered into a License and Collaboration Agreement with Shire Pharmaceuticals Ireland Ltd. (Shire). Under the agreement, the Company and Shire will jointly develop the Company's three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal (migalastat hydrochloride), Plicera (isofagomine tartrate) and AT2220 (1-deoxynojirimycin HCl). For further information, see Note 12. Development and Commercialization Agreement with Shire.

The Company had an accumulated deficit of approximately \$164.2 million at December 31, 2008 and anticipates incurring losses through the year 2009 and beyond. The Company has not yet generated commercial sales revenue and has been able to fund its operating losses to date through the sale of its redeemable convertible preferred stock, issuance of convertible notes, net proceeds from our initial public offering (IPO), the upfront licensing payment from Shire, reimbursed research and development costs from Shire and other financing arrangements. The Company believes that its existing cash and cash equivalents and short-term investments will be sufficient to covers its cash flow requirements for 2009.

**2. Summary of Significant Accounting Policies**

***Basis of Presentation***

The accompanying consolidated financial statements have been prepared in accordance with United States (U.S.) generally accepted accounting principles (U.S. GAAP) and include all adjustments necessary for the fair presentation of the Company's financial position for the periods presented.

***Consolidation***

The financial statements include the accounts of Amicus Therapeutics, Inc. and its wholly owned subsidiary, Amicus Therapeutics UK Limited. All significant intercompany transactions and balances are eliminated in consolidation. This subsidiary is not material to the overall financial statements of the Company.

***Reclassifications***

Certain reclassifications have been made to the December 31, 2007 consolidated financial statements in order to conform to the December 31, 2008 consolidated financial statements presentation. These reclassifications do not have an effect on net loss as previously reported.

***Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

***Cash and Cash Equivalents***

The Company considers all highly liquid investments purchased with a maturity of three months or less at the date of acquisition, to be cash equivalents.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

***Investment in Marketable Securities***

Marketable securities consist of fixed income investments with a maturity of greater than three months and other highly liquid investments that can be readily purchased or sold using established markets. In accordance with Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards (SFAS) No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, these investments are classified as available-for-sale and are reported at fair value on the Company's balance sheet. Unrealized holding gains and losses are reported within accumulated other comprehensive income/ (loss) as a separate component of stockholders (deficiency) equity. If a decline in the fair value of a marketable security below the Company's cost basis is determined to be other than temporary, such marketable security is written down to its estimated fair value as a new cost basis and the amount of the write-down is included in earnings as an impairment charge. To date, only temporary impairment charges have been recorded in any of the years presented herein.

The Company adopted SFAS No. 157, *Fair Value Measurements* (SFAS No. 157), on January 1, 2008. SFAS No. 157 is applicable for all financial assets and liabilities that are recognized or disclosed at fair value on a recurring basis. In accordance with SFAS No. 157, the Company's available for sale investment securities are classified within Level 1 or Level 2 of the fair value hierarchy. These investment securities are valued using quoted market prices, broker or dealer quotations or other observable inputs.

***Concentration of Credit Risk***

The Company's financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents and marketable securities. The Company maintains its cash and cash equivalents in bank accounts, which, at times, exceed federally insured limits. The Company invests its marketable securities in high-quality commercial financial instruments. The Company has not recognized any losses from credit risks on such accounts during any of the periods presented. The Company believes it is not exposed to significant credit risk on cash and cash equivalents or its marketable securities.

***Property and Equipment***

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is calculated over the estimated useful lives of the respective assets, which range from three to five years, or the lesser of the related initial term of the lease or useful life for leasehold improvements. Assets under capital leases are amortized over the terms of the related leases or their estimated useful lives, whichever is shorter.

The initial cost of property and equipment consists of its purchase price and any directly attributable costs of bringing the asset to its working condition and location for its intended use. Expenditures incurred after the fixed assets have been put into operation, such as repairs and maintenance, are charged to income in the period in which the costs are incurred. Major replacements, improvements and additions are capitalized in accordance with Company policy.

***Impairment of Long-Lived Assets***

The Company performs a review of long-lived assets for impairment when events or changes in circumstances indicate the carrying value of such assets may not be recoverable. If an indication of impairment is present, the Company compares the estimated undiscounted future cash flows to be generated by the asset to its carrying amount. If the undiscounted future cash flows are less than the carrying amount of the asset, the Company records an impairment loss equal to the excess of the asset's carrying amount over its fair value. The fair value is determined based on valuation techniques such as a comparison to fair values of similar assets or using a discounted cash flow analysis. There were no impairment charges recognized during the years ended December 31, 2006, 2007 and 2008.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

***Revenue Recognition***

The Company recognizes revenue in accordance with the Securities and Exchange Commission (SEC) Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements* (SAB 101), as amended by Staff Accounting Bulletin No. 104, *Revision of Topic 13* (SAB 104).

In determining the accounting for collaboration agreements, the Company follows the provisions of Emerging Issues Task Force (EITF) Issue 00-21, *Revenue Arrangements with Multiple Deliverables* (EITF 00-21). EITF 00-21 provides guidance on whether an arrangement involves multiple revenue-generating deliverables that should be accounted for as a single unit of accounting or divided into separate units of accounting for revenue recognition purposes and, if this division is required, how the arrangement consideration should be allocated among the separate units of accounting. If the arrangement represents a single unit of accounting, the revenue recognition policy and the performance obligation period must be determined (if not already contractually defined) for the entire arrangement. If the arrangement represents separate units of accounting according to the EITF's separation criteria, a revenue recognition policy must be determined for each unit. Revenues for non-refundable upfront license fee payments will be recognized on a straight line basis as Collaboration Revenue over the period of the performance obligations. Revenues for research and development costs that are reimbursable under collaboration agreements are recognized in accordance with EITF Issue 99-19, *Reporting Revenue Gross as a Principal Versus Net as an Agent* (EITF 99-19). The revenue associated with these reimbursable amounts is included in Research Revenue and the costs associated with these reimbursable amounts are included in research and development expenses. The Company records these reimbursements as revenue and not as a reduction of research and development expenses as the Company has the risks and rewards as the principal in the research and development activities.

***Research and Development Costs***

Research and development costs are expensed as incurred. Research and development expense consists primarily of costs related to personnel, including salaries and other personnel-related expenses, consulting fees and the cost of facilities and support services used in drug development. Assets acquired that are used for research and development and have no future alternative use are expensed as in-process research and development.

***Interest Income and Interest Expense***

Interest income consists of interest earned on the Company's cash and cash equivalents and marketable securities. Interest expense consists of interest incurred on capital leases.

***Other Income and Expenses***

During the second and third quarter of 2006, the Company deferred and capitalized \$1.2 million of costs directly attributable to the planned offering of its securities as other non-current assets. These costs were recorded as other expenses when the planned offering was withdrawn during the third quarter of 2006.

***Income Taxes***

The Company accounts for income taxes under the liability method. Under this method deferred income tax liabilities and assets are determined based on the difference between the financial statement carrying amounts and tax basis of assets and liabilities and for operating losses and tax credit carryforwards, using enacted tax rates in effect in the years in which the differences are expected to reverse. A valuation allowance is recorded if it is more likely than not that a portion or all of a deferred tax asset will not be realized.

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**Amicus Therapeutics, Inc.  
(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

In June 2006, the FASB issued FASB Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* an *Interpretation of FASB Statement No. 109* (FIN 48). FIN 48 addresses the accounting and disclosure of uncertain tax positions. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken. The Company adopted FIN 48 on January 1, 2007 as required and determined that the adoption of FIN 48 did not have a material impact on the Company's financial position and results of operations.

***Other Comprehensive Income/ (Loss)***

SFAS No. 130, *Reporting Comprehensive Income*, requires components of other comprehensive income/ (loss), including unrealized gains and losses on available-for-sale securities, to be included as part of total comprehensive income/ (loss). The components of comprehensive gain/loss are included in the statements of changes in stockholders (deficiency) equity.

***Leases***

In the ordinary course of business, the Company enters into lease agreements for office space as well as leases for certain property and equipment. The leases have varying terms and expirations and have provisions to extend or renew the lease agreement, among other terms and conditions, as negotiated. Once the agreement is executed, the lease is assessed to determine whether the lease qualifies as a capital or operating lease.

When a non-cancelable operating lease includes any fixed escalation clauses and lease incentives for rent holidays or build-out contributions, rent expense is recognized on a straight-line basis over the initial term of the lease. The excess between the average rental amount charged to expense and amounts payable under the lease is recorded in accrued expenses.

***Redeemable Convertible Preferred Stock***

The carrying value of redeemable convertible preferred stock was increased by periodic accretions so that the carrying amount would equal the redemption amount at the earliest redemption date. These increases were reflected through charges to additional paid-in capital since the Company did not have retained earnings. Redeemable convertible preferred stock was converted into common stock upon completion of the Company's IPO on a one-for-one basis.

***Warrants to Purchase Redeemable Convertible Preferred Stock***

The Company accounted for its warrants to purchase shares of its Series B redeemable convertible preferred stock (Series B Warrants) in accordance with FASB Staff Position 150-5: *Issuer's Accounting under FASB Statement No. 150 for Freestanding Warrants and Other Similar Instruments on Shares That Are Redeemable (FSP 150-5)*. As the Series B Preferred shares underlying the warrants had redemption rights, the warrants to purchase Series B shares were classified as a liability. The Company measured the fair value of its warrant liability using the Black-Scholes option pricing model with changes in fair value recognized as non-operating income or expense. The value of the warrant liability at issuance was \$0.4 million. In connection with the Company's IPO, the Series B warrants were exercised for 40,797 shares of Series B redeemable convertible preferred stock and automatically converted into common stock on a one-for-one basis.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

**Stock-Based Compensation**

At December 31, 2008, the Company had three stock-based employee compensation plans, which are described more fully in Note 7. Stock Option Plans. Until May 2007, the Company had one stock-based employee compensation plan. Prior to January 1, 2006, the Company accounted for this plan under the recognition and measurement provisions of Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB No. 25) and related interpretations, as permitted by SFAS No. 123, *Accounting for Stock-Based Compensation*. Stock-based employee compensation cost was recognized in the statement of operations for periods prior to January 1, 2006; to the extent options granted under the plan had an exercise price that was less than the fair market value of the underlying common stock on the date of grant. Under the prospective transition method, compensation cost recognized for all stock-based payments granted subsequent to January 1, 2006 is based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). Results for prior periods have not been restated.

The Company recognized stock-based compensation expense of \$3.3 million, \$4.0 million and \$6.4 million in 2006, 2007 and 2008, respectively. The following table summarizes information related to stock compensation expense recognized in the income statement (in thousands):

|   | <b>Years Ended December 31,</b> |             |             |
|---|---------------------------------|-------------|-------------|
|   | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| Stock compensation expense recognized in: |                                 |             |             |
| Research and development expense          | \$ 1.7                          | \$ 1.6      | \$ 2.5      |
| General and administrative expense        | 1.6                             | 2.4         | 3.9         |
| Total stock compensation expense          | \$ 3.3                          | \$ 4.0      | \$ 6.4      |

**Beneficial Conversion Charges**

When the Company issues debt or equity securities which are convertible into common stock at a discount from the common stock fair value at the date the debt or equity financing is committed, a beneficial conversion charge is measured as the difference between the closing price and the conversion price at the commitment date. The beneficial conversion charge is presented as a discount or reduction to the related security, with an offsetting amount increasing additional paid-in capital. The Company also recorded a beneficial conversion charge (also referred to as a deemed dividend) during April of 2006 of approximately \$19.4 million related to the issuance of certain shares of Series C redeemable convertible preferred stock. The beneficial conversion charge for equity instruments is recorded with offsetting charges and credits to additional paid in capital with no effect on total shareholder equity. The Series C investors committed to finance the additional issuance of the Series C redeemable convertible preferred stock on March 31, 2006. The estimated fair value of the common stock was approximately \$16.13 per share at the commitment date of the additional issuance and the beneficial conversion charge was recognized upon issuance of the Series C redeemable convertible preferred stock as such stock could be converted upon issuance. The Company did not record a beneficial conversion charge for any other redeemable convertible preferred stock issuances as the common stock fair value was less than the conversion price of each offering on the respective commitment dates of those offerings.

**Basic and Diluted Net Loss Attributable to Common Stockholders per Common Share**

The Company calculates net loss per share in accordance with SFAS No. 128, *Earnings Per Share*. The Company has determined that its Series A, B, C, and D redeemable convertible preferred stock represent participating securities in accordance with EITF Issue No. 03-6, *Participating Securities and the Two Class Method under FASB Statement No. 128*. However, since the Company operates at a loss, and losses are not allocated to the redeemable convertible preferred stock, the two class method does not affect the Company's calculation of earnings per share. The Company has a net loss for all periods presented; accordingly, the inclusion of common stock options and warrants would be



anti-dilutive. Therefore, the weighted average shares used to calculate both basic and diluted earnings per share are the same.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

The following table provides a reconciliation of the numerator and denominator used in computing basic and diluted net loss attributable to common stockholders per common share and pro forma net loss attributable to common stockholders per common share (in thousands except share amounts):

|  | <b>Years Ended December 31,</b> |             |             |
|--|---------------------------------|-------------|-------------|
|  | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| <b>Historical</b>  |                                 |             |             |
| Numerator:   |                                 |             |             |
| Net loss   | \$ (46,345)                     | \$ (41,167) | \$ (39,355) |
| Deemed dividend  | (19,424)                        |             |             |
| Accretion of redeemable convertible preferred stock          | (159)                           | (351)       |             |
| Net loss attributable to common stockholders                 | \$ (65,928)                     | \$ (41,518) | \$ (39,355) |
| Denominator:   |                                 |             |             |
| Weighted average common shares outstanding basic and diluted | 735,967                         | 13,235,755  | 22,493,803  |

Dilutive common stock equivalents would include the dilutive effect of convertible securities, common stock options and warrants for common stock equivalents. Potentially dilutive common stock equivalents totaled approximately 17.5 million, 24.9 million and 25.7 million for the years ended December 31, 2006, 2007 and 2008, respectively. Potentially dilutive common stock equivalents were excluded from the diluted earnings per share denominator for all periods because of their anti-dilutive effect.

**Dividends**

The Company has not paid cash dividends on its capital stock to date. The Company currently intends to retain its future earnings, if any, to fund the development and growth of the business and do not foresee payment of a dividend in any upcoming fiscal period.

**Recent Accounting Pronouncements**

In May 2008, the FASB issued FASB Staff Position (FSP) No. 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)*, which specifies that issuers of these instruments should separately account for the liability and equity components in a manner that reflects the entity's nonconvertible debt borrowing rate when interest cost is recognized in subsequent periods. FSP No. 14-1 is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. FSP No. 14-1 is also to be applied retrospectively to all periods presented except if these instruments were not outstanding during any of the periods that are presented in the annual financial statements for the period of adoption but were outstanding during an earlier period. The Company does not expect that this will have a significant impact on the financial statements of the Company.

In December 2007, the EITF of the FASB reached a consensus on issue No. 07-1, *Accounting for Collaborative Arrangements* (EITF 07-1). The EITF concluded on the definition of a collaborative arrangement and that revenues and costs incurred with third parties in connection with collaborative arrangements would be presented gross or net based on the criteria in EITF 99-19 and other accounting literature. Based on the nature of the arrangement, payments to or from collaborators would be evaluated and its terms, the nature of the entity's business, and whether those payments are within the scope of other accounting literature would be presented. Companies are also required to disclose the nature and purpose of collaborative arrangements along with the accounting policies and the classification

and amounts of significant financial-statement balances related to the arrangements. Activities in the arrangement conducted in a separate legal entity should be accounted for under other accounting literature; however required disclosure under EITF 07-1 applies to the entire collaborative agreement. This Issue is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years, and is to be applied retrospectively to all periods presented for all collaborative arrangements existing as of the effective date. The Company does not expect that this will have a significant impact on the financial statements of the Company.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

In December 2007, the FASB issued SFAS No. 141(R), *Business Combinations* (SFAS No. 141(R)), which replaces SFAS No. 141, *Business Combinations*, requires an acquirer to recognize the assets acquired, the liabilities assumed, and any non-controlling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This Statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the non-controlling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this Statement. This Statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The Company does not expect that this will have a significant impact on the financial statements of the Company.

In December 2007, FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements* (SFAS No. 160), which amends Accounting Research Bulletin No. 51, *Consolidated Financial Statements*, to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. SFAS No. 160 establishes accounting and reporting standards that require the ownership interests in subsidiaries not held by the parent to be clearly identified, labeled and presented in the consolidated statement of financial position within equity, but separate from the parent's equity. This statement also requires the amount of consolidated net income attributable to the parent and to the non-controlling interest to be clearly identified and presented on the face of the consolidated statement of income. Changes in a parent's ownership interest while the parent retains its controlling financial interest must be accounted for consistently, and when a subsidiary is deconsolidated, any retained non-controlling equity investment in the former subsidiary must be initially measured at fair value. The gain or loss on the deconsolidation of the subsidiary is measured using the fair value of any non-controlling equity investment. The Statement also requires entities to provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the non-controlling owners. This Statement applies prospectively to all entities that prepare consolidated financial statements and applies prospectively for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. The Company does not expect that this will have a significant impact on the financial statements of the Company.

In June 2007, the EITF of the FASB reached a consensus on Issue No. 07-3, *Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities* (EITF 07-3). EITF 07-3 requires that non-refundable advance payments for goods or services that will be used or rendered for future research and development activities should be deferred and capitalized. As the related goods are delivered or the services are performed, or when the goods or services are no longer expected to be provided, the deferred amounts would be recognized as an expense. This Issue is effective for financial statements issued for fiscal years beginning after December 15, 2007 and earlier application is not permitted. This consensus is to be applied prospectively for new contracts entered into on or after the effective date. The pronouncement did not have a material effect on the financial statements of the Company.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an amendment of FASB Statement No. 115* (SFAS No. 159), which is effective for fiscal years beginning after November 15, 2007. SFAS No. 159 permits the Company to choose to measure many financial instruments and certain other items at fair value. The objective is to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions. SFAS No. 159 is expected to expand the use of fair value measurement, which is consistent with the FASB's long-term measurement objectives for accounting for financial instruments. SFAS No. 159 is effective for fiscal year 2008 but early adoption is permitted. The pronouncement did not have a material effect on the financial statements of the Company.



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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

***Segment Information***

The Company currently operates in one business segment focusing on the development and commercialization of small molecule, orally administered therapies to treat a range of human genetic diseases. The Company is not organized by market and is managed and operated as one business. A single management team reports to the chief operating decision maker who comprehensively manages the entire business. The Company does not operate any separate lines of business or separate business entities with respect to its products. Accordingly, the Company does not accumulate discrete financial information with respect to separate service lines and does not have separately reportable segments as defined by SFAS No. 131, *Disclosure About Segments of an Enterprise and Related Information*.

**3. Investments in Marketable Securities**

The Company adopted SFAS No. 157, *Fair Value Measurements* (SFAS No. 157), on January 1, 2008. SFAS No. 157 is applicable for all financial assets and liabilities that are recognized or disclosed at fair value on a recurring basis. SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and expands disclosures about fair value measurements. SFAS No. 157 requires fair value measurements be classified and disclosed in one of the following three categories:

*Level 1* Quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

*Level 2* Inputs other than quoted prices in active markets that are observable for the asset or liability, either directly or indirectly.

*Level 3* Inputs that are unobservable for the asset or liability.

As of December 31, 2008, the Company held \$93.0 million of available for sale investment securities. In accordance with SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, these investments are reported at fair value on the Company's balance sheet. Unrealized holding gains and losses are reported within accumulated other comprehensive income/ (loss) as a separate component of stockholders' (deficiency) equity. If a decline in the fair value of a marketable security below the Company's cost basis is determined to be other than temporary, such marketable security is written down to its estimated fair value as a new cost basis and the amount of the write-down is included in earnings as an impairment charge. To date, only temporary impairment charges have been recorded.

The recent and precipitous decline in the market value of certain securities backed by residential mortgage loans has led to a large liquidity crisis affecting the broader U.S. housing market, the financial services industry and global financial markets. Investors holding many of these and related securities have experienced substantial decreases in asset valuations and uncertain secondary market liquidity. Furthermore, credit rating authorities have, in many cases, been slow to respond to the rapid changes in the underlying value of certain securities and pervasive market illiquidity, regarding these securities.

As a result, this credit crisis may have a potential impact on the determination of the fair value of financial instruments or possibly require impairments in the future should the value of certain investments suffer a decline in value which is determined to be other than temporary.

Consistent with the Company's investment policy, the Company does not use derivative financial instruments in its investment portfolio. The Company regularly invests excess operating cash in deposits with major financial institutions, money market funds, notes issued by the U.S. government, as well as fixed income investments and U.S. bond funds both of which can be readily purchased and sold using established markets. The Company believes that the market risk arising from its holdings of these financial instruments is mitigated as many of our securities are either government backed or of the highest credit rating.

The Company's investment portfolio has not been adversely materially impacted by the recent disruption in the credit markets. However, if there is continued and expanded disruption in the credit markets, there can be no assurance that the Company's investment portfolio will not be adversely affected in the future.



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**Amicus Therapeutics, Inc.**  
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**Notes To Consolidated Financial Statements (Continued)**

The Company's available for sale investment securities are classified within Level 1 or Level 2 of the fair value hierarchy. These investment securities are valued using quoted market prices, broker or dealer quotations or other observable inputs. The fair value measurements of the Company's available for sale investment securities are identified in the following table (in thousands):

|                                      | <b>Fair Value Measurements at Reporting Date using</b> |   |  |  |
|--------------------------------------|--|---|--|--|
|                                      | <b>December 31, 2008</b>                               | <b>Quoted Prices In Active Markets for Identical Assets (Level 1)</b> | <b>Significant Other Observable Inputs (Level 2)</b> | <b>Significant Unobservable Inputs (Level 3)</b> |
| Commercial paper                     | \$ 22,447  | \$  | \$ 22,447  | \$   |
| Asset-backed securities              | 7,217  |   | 7,217  |  |
| U.S. government agency securities    | 58,790   |   | 58,790   |  |
| Corporate debt securities            | 4,597  |   | 4,597  |  |
| Money market fund (cash equivalents) | 24,626   | 24,626  |  |  |
|                                      | <b>\$ 117,677</b>                                      | <b>\$ 24,626</b>  | <b>\$ 93,051</b>                                     | <b>\$</b>  |

All of the Company's available for sale investments as of December 31, 2007 and 2008 are due in one year or less. Unrealized gains and losses are reported as a component of accumulated other comprehensive gain/loss in stockholders' (deficiency) equity. For the years ended December 31, 2007 and 2008, unrealized holding gains included in accumulated other comprehensive income/(loss) were \$0.4 million and \$0.1 million, respectively. For the years ended December 31, 2007 and 2008, there were no realized gains or losses. The cost of securities sold is based on specific identification method.

Unrealized loss positions in the available for sale securities as of December 31, 2007 and 2008 reflect temporary impairments that have not been recognized and have been in a loss position for less than twelve months. The fair value of these available for sale securities in unrealized loss positions was \$14.7 million and \$8.9 million as of December 31, 2007 and 2008, respectively.

#### **4. Property and Equipment**

Property and equipment consist of the following (in thousands):

|  | <b>December 31,</b> |             |
|--|---------------------|-------------|
|  | <b>2007</b>         | <b>2008</b> |
| Property and equipment consist of the following: |                     |             |
| Computer equipment                               | \$ 694              | \$ 1,322    |
| Computer software                                | 167                 | 996         |
| Research equipment                               | 3,089               | 4,096       |
| Furniture and fixtures                           | 579                 | 657         |
| Leasehold improvements                           | 2,054               | 2,108       |



|  |          |          |
|--|----------|----------|
|  | 6,583    | 9,179    |
| Less accumulated depreciation and amortization | (2,793)  | (4,260)  |
|  | \$ 3,790 | \$ 4,919 |

Included in property and equipment are costs capitalized pursuant to capital lease obligations of \$5.5 million and \$5.4 million at December 31, 2007 and 2008. Depreciation and amortization expense relating to the capital lease obligations was \$0.8 million, \$1.1 million, \$1.1 million and \$3.1 million for the years ended December 31, 2006, 2007, and 2008, and for the Period February 4, 2002 (inception) to December 31, 2008, respectively.

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**Notes To Consolidated Financial Statements (Continued)**

**5. Accounts Payable and Accrued Expenses**

Accrued expenses consist of the following (in thousands):

|  | <b>December 31,</b> |                 |
|--|---------------------|-----------------|
|  | <b>2007</b>         | <b>2008</b>     |
| Accounts payable   | \$ 530              | \$ 1,987        |
| Accrued professional fees                                | 979                 | 283             |
| Accrued contract manufacturing & contract research costs | 6,035               | 2,985           |
| Accrued compensation and benefits                        | 2,279               | 2,846           |
| Accrued facility costs                                   | 364                 | 281             |
| Accrued other  | 278                 | 414             |
|  | <b>\$ 10,465</b>    | <b>\$ 8,796</b> |

**6. Capital Structure*****Common Stock***

As of December 31, 2008, the Company was authorized to issue 50,000,000 shares of common stock. Dividends on common stock will be paid when, and if declared by the board of directors. Each holder of common stock is entitled to vote on all matters and is entitled to one vote for each share held.

In June 2007, the Company closed its IPO of 5,000,000 shares of its common stock at a public offering price of \$15.00 per share. Net proceeds to the Company were approximately \$68.1 million, after deducting underwriting discounts, commissions and offering expenses totaling approximately \$6.9 million. In connection with the initial public offering, the outstanding shares of Series A redeemable convertible preferred stock were converted into 444,443 shares of common stock, the outstanding shares of Series B redeemable convertible preferred stock were converted into 4,877,056 shares of common stock, the outstanding shares of Series C redeemable convertible preferred stock were converted into 5,820,020 shares of common stock and the outstanding shares of Series D redeemable convertible preferred stock were converted into 4,930,405 shares of common stock. In connection with the IPO, the outstanding warrants to purchase Series B redeemable convertible preferred stock were automatically exercised and the shares of Series B redeemable convertible preferred stock automatically converted into 40,797 shares of the common stock. As a result, the Company no longer recognizes accretion expense for preferred stock or non-operating income or expense for changes in the fair value of the warrant liability.

In connection with an employment agreement and director compensation agreement, the Company issued 53,333 shares of common stock in return for services in 2005. The shares will vest over three and four year periods. The Company recorded \$0.04 million, \$0.1 million and \$0.1 million as compensation expense during 2006, 2007 and 2008, respectively, in connection with the issuance of these restricted shares.

In connection with the formation of the Company, the Company issued 232,266 shares of common stock to the Mount Sinai School of Medicine of New York University (MSSM) in exchange for exclusive license rights for certain intellectual property. The value of the shares was accounted for as in-process research and development. In October of 2006, the Company amended its license agreement MSSM to expand its exclusive worldwide patent rights to develop and commercialize pharmacological chaperones. In connection with the amendment, the Company paid \$1.0 million and issued 133,333 shares of its common stock valued at \$1.2 million to MSSM.



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**Notes To Consolidated Financial Statements (Continued)**

**Redeemable Convertible Preferred Stock**

In June 2007 in connection with the IPO, all outstanding redeemable convertible preferred stock was converted to common stock. As of the IPO conversion date, Series A, Series B, Series C, and Series D were converted at their respected stated values (estimated fair value of \$5.63 per share, \$6.32 per share, \$9.45 per share, and \$12.17 per share, respectively, less issuance costs and accretion adjustments).

|  | Series A |                             | Series B  |                             | Series C |                             | Series D |                             |
|--|----------|-----------------------------|-----------|-----------------------------|----------|-----------------------------|----------|-----------------------------|
|  | Shares   | Amount<br>(in<br>thousands) | Shares    | Amount<br>(in<br>thousands) | Shares   | Amount<br>(in<br>thousands) | Shares   | Amount<br>(in<br>thousands) |
| Balance at<br>February 4, 2002<br>(inception)  |          | \$                          |           | \$                          |          | \$                          |          | \$                          |
| Issuance of<br>Series A at \$5.63<br>per share | 444,443  | 2,500                       |           |                             |          |                             |          |                             |
| Issuance costs                                 |          | (95)                        |           |                             |          |                             |          |                             |
| Accretion                                      |          | 10                          |           |                             |          |                             |          |                             |
| <br>   |          |                             |           |                             |          |                             |          |                             |
| Balance at<br>December 31,<br>2002             | 444,443  | 2,415                       |           |                             |          |                             |          |                             |
| Accretion                                      |          | 17                          |           |                             |          |                             |          |                             |
| <br>   |          |                             |           |                             |          |                             |          |                             |
| Balance at<br>December 31,<br>2003             | 444,443  | 2,432                       |           |                             |          |                             |          |                             |
| Issuance of<br>Series B at \$6.38<br>per share |          |                             | 2,823,523 | 18,000                      |          |                             |          |                             |
| Issuance cost                                  |          |                             |           | (122)                       |          |                             |          |                             |
| Issuance of<br>warrants with<br>Series B       |          |                             |           | (422)                       |          |                             |          |                             |
| Accretion                                      |          | 17                          |           | 109                         |          |                             |          |                             |
| <br>   |          |                             |           |                             |          |                             |          |                             |
| Balance at<br>December 31,<br>2004             | 444,443  | 2,449                       | 2,823,523 | 17,565                      |          |                             |          |                             |
| Issuance of<br>Series B at \$6.38<br>per share |          |                             | 2,039,211 | 13,000                      |          |                             |          |                             |
| Issuance cost                                  |          |                             |           | (6)                         |          |                             |          |                             |

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|  |         |       |           |        |           |        |
|--|---------|-------|-----------|--------|-----------|--------|
| Issuance of Series C at \$9.45 per share |         |       |           |        | 2,910,010 | 27,500 |
| Issuance cost                            |         |       |           |        |           | (178)  |
| Accretion                                |         | 17    |           | 110    |           | 12     |
| Balance at December 31, 2005             | 444,443 | 2,466 | 4,862,734 | 30,669 | 2,910,010 | 27,334 |

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**Notes To Consolidated Financial Statements (Continued)**

|   | Series A  |                             | Series B    |                             | Series C    |                             | Series D    |                             |
|---|-----------|-----------------------------|-------------|-----------------------------|-------------|-----------------------------|-------------|-----------------------------|
|   | Shares    | Amount<br>(in<br>thousands) | Shares      | Amount<br>(in<br>thousands) | Shares      | Amount<br>(in<br>thousands) | Shares      | Amount<br>(in<br>thousands) |
| Balance at<br>December 31,<br>2005                    | 444,443   | 2,466                       | 4,862,734   | 30,669                      | 2,910,010   | 27,334                      |             |                             |
| Exercise of<br>warrants with<br>Series B at<br>\$6.38 |           |                             | 14,322      | 91                          |             |                             |             |                             |
| Issuance of<br>Series C at<br>\$9.45 per share        |           |                             |             |                             | 2,910,010   | 27,500                      |             |                             |
| Issuance of<br>Series D at<br>\$12.15 per<br>share    |           |                             |             |                             |             |                             | 2,953,878   | 35,947                      |
| Issuance cost   |           |                             |             |                             |             |                             |             | (76)                        |
| Accretion to<br>redemption<br>value                   |           | 10                          |             | 108                         |             | 35                          |             | 5                           |
| Balance at<br>December 31,<br>2006                    | 444,443   | 2,476                       | 4,877,056   | 30,868                      | 5,820,020   | 54,869                      | 2,953,878   | 35,876                      |
| Issuance of<br>Series D at<br>\$12.15 per<br>share    |           |                             |             |                             |             |                             | 1,976,527   | 24,053                      |
| Series B<br>warrant<br>exercise                       |           |                             | 40,797      | 98                          |             |                             |             |                             |
| Accretion to<br>redemption<br>value                   |           | 24                          |             | 126                         |             | 130                         |             | 71                          |
| Conversion of<br>preferred stock<br>to common         | (444,443) | (2,500)                     | (4,917,853) | (31,092)                    | (5,820,020) | (54,999)                    | (4,930,405) | (60,000)                    |
| Balance at<br>December 31,<br>2007                    |           | \$                          |             | \$                          |             | \$                          |             | \$                          |

***Warrants***

During 2002, the Company issued 5,333 common stock warrants to a vendor as part of a capital lease agreement. These warrants were outstanding at December 31, 2005 and 2006. The warrants have an exercise price of \$5.63 per share (adjusted for stock splits, stock dividends, etc.). The value of the warrants was calculated using the Black-Scholes option pricing model and was capitalized as debt issuance cost and amortized to interest expense over the term of the obligation. The value of the warrants and total charge to interest expense was not material for each of the years presented.

In 2003, the Company issued 133,332 common stock warrants to certain investors in connection with its Bridge Loans. The warrants had an exercise price of \$0.56 per share (adjusted for stock splits, stock dividends, etc.). The value of the warrants of \$0.2 million was calculated using the Black-Scholes option pricing model and was accounted for as debt discount and amortized to interest expense over the term of the loans. These same warrant shares were exercised in 2005. The total charge to interest expense was \$0.1 million for the year ended December 31, 2004.

In 2004, the Company issued warrants to purchase 73,996 Series B shares to certain investors as part of the Series B financing. The warrants had an exercise price of \$6.38 per share (adjusted for stock splits, stock dividends, etc.) and could have been exercised for cash or net shares at the option of the warrant holders. During 2006 there were 14,322 warrants exercised for Series B shares. In connection with the IPO, the remaining 40,797 warrants were automatically exercised and converted into 40,797 common shares. As the Series B Preferred shares underlying the warrants had redemption rights, the warrants to purchase Series B shares were classified as a liability in accordance with FSP 150-5.

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**Notes To Consolidated Financial Statements (Continued)**

The Company measured the fair value of its warrant liability using the Black-Scholes option pricing model with changes in fair value recognized in earnings. The value of the warrant liability at issuance was \$0.4 million. The Company recognized changes in the fair value of the warrant liability as non-operating income or (expense) of \$0, \$(0.3 million), and \$(0) in 2004, 2005, and 2006, respectively. In connection with the Company's IPO, the Series B warrants were exercised for 40,797 shares of Series B redeemable convertible preferred stock and automatically converted into common stock on a one-for-one basis. As of December 31, 2008, there were no warrants outstanding.

**7. Stock Option Plans**

In April 2002, the Company's Board of Directors and shareholders approved the Company's 2002 Stock Option Plan (the 2002 Plan). In May 2007, the Company's Board of Directors and shareholders approved the Company's 2007 Stock Option Plan (the 2007 Plan) and 2007 Director Option Plan (the 2007 Director Plan). In June 2008, the Company's Board of Directors and shareholders approved amendments to the 2007 Plan. Both the 2002 Plan and 2007 Plan provide for the granting of restricted stock and options to purchase common stock in the Company to employees, advisors and consultants at a price to be determined by the Company's board of directors. The 2002 Plan and the 2007 Plan are intended to encourage ownership of stock by employees and consultants of the Company and to provide additional incentives for them to promote the success of the Company's business. The Options may be incentive stock options (ISOs) or non-statutory stock options (NSOs). Under the provisions of each plan, no option will have a term in excess of 10 years. The 2007 Director Plan is intended to promote the recruiting and retention of highly qualified eligible directors and strengthen the commonality of interest between directors and stockholders by encouraging ownership of common stock of the Company. The options granted under the 2007 Director Plan are NSOs and under the provisions of this plan, no option will have a term in excess of 10 years.

The Board of Directors, or its committee, is responsible for determining the individuals to be granted options, the number of options each individual will receive, the option price per share, and the exercise period of each option. Options granted pursuant to both the 2002 Plan and the 2007 Plan generally vest 25% on the first year anniversary date of grant plus an additional 1/48th for each month thereafter and may be exercised in whole or in part for 100% of the shares vested at any time after the date of grant. Options under the 2007 Director Plan are granted at the annual meeting of stockholders and vest on the date of the annual meeting of stockholders of the Company in the year following the year during which the options were automatically granted.

As of December 31, 2008, there were no shares reserved for issuance under the 2002 Plan. The Company has reserved up to 2,055,926 shares for issuance under the 2007 Plan and the 2007 Director Plan.

The Company recognized stock-based compensation expense of \$3.3 million, \$4.0 million and \$6.4 million in 2006, 2007 and 2008, respectively. The following table summarizes information related to stock compensation expense recognized in the income statement (in thousands):

|   | <b>Years Ended December 31,</b> |             |             |
|---|---------------------------------|-------------|-------------|
|   | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| Stock compensation expense recognized in: |                                 |             |             |
| Research and development expense          | \$ 1.7                          | \$ 1.6      | \$ 2.5      |
| General and administrative expense        | 1.6                             | 2.4         | 3.9         |
| Total stock compensation expense          | \$ 3.3                          | \$ 4.0      | \$ 6.4      |

Effective January 1, 2006, the Company adopted the fair value recognition provisions of SFAS No. 123(R), *Share-Based Payment* (SFAS No. 123(R)), using the prospective transition method. Under the prospective transition method, compensation expense is recognized in the financial statements on a prospective basis for all share-based payments granted subsequent to January 1, 2006, based upon the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). For options granted prior to January 1, 2006, as a non-public company and



accounted for using the intrinsic value method, the Company will continue to expense any intrinsic value recognized over the vesting period. The grant-date fair value of awards expected to vest is expensed on a straight-line basis over the vesting period of the related awards. Under the prospective transition method, results for prior periods are not restated and pro forma disclosures for outstanding awards accounted for under the intrinsic value method of APB No. 25 are not presented since the Company used the minimum value method for pro forma disclosure purposes prior to January 1, 2006.

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SFAS No. 123(R) does not change the accounting guidance for how the Company accounts for options issued to non-employees. The Company accounts for options issued to non-employees in accordance with SFAS No. 123 and EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services* (EITF 96-18). As such, the value of such options is periodically re-measured and income or expense is recognized during the vesting terms.

The Company uses the Black-Scholes option pricing model when estimating the fair value for stock-based awards. The fair value of stock option awards subsequent to December 31, 2005 is amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on a blended weighted average of historical information of our stock and the weighted average of historical information of similar public entities for which historical information was available. The Company will continue to use a blended weighted average approach using our own historical volatility and other similar public entity volatility information until our historical volatility is relevant to measure expected volatility for future option grants. The average expected life was determined according to the SEC shortcut approach as described in SAB No. 107, which is the mid-point between the vesting date and the end of the contractual term. The risk-free interest rate is based on U.S. Treasury, zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. Forfeitures are estimated based on voluntary termination behavior, as well as a historical analysis of actual option forfeitures. The weighted-average grant-date fair value per share of options granted during 2006, 2007 and 2008 were \$10.20, \$9.45 and \$7.36, respectively. The weighted average assumptions used in the Black-Scholes option pricing model are as follows:

|                                    | <b>Years Ended December 31,</b> |             |             |
|------------------------------------|---------------------------------|-------------|-------------|
|                                    | <b>2006</b>                     | <b>2007</b> | <b>2008</b> |
| Expected stock price volatility    | 74.8%                           | 78.3%       | 78.2%       |
| Risk free interest rate            | 4.7%                            | 4.5%        | 3.0%        |
| Expected life of options (years)   | 6.25                            | 6.25        | 6.25        |
| Expected annual dividend per share | \$ 0.00                         | \$ 0.00     | \$ 0.00     |

The following table summarizes information about stock options outstanding:

|  | <b>Number of<br/>Shares<br/>(in<br/>thousands)</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price</b> | <b>Weighted<br/>Average<br/>Remaining<br/>Contractual<br/>Life</b> | <b>Aggregate<br/>Intrinsic<br/>Value<br/>(in<br/>millions)</b> |
|--|--|--|--|--|
| Options outstanding, December 31, 2005 | 1,237.1  | \$ 2.10  |  |  |
| Granted                                | 1,005.1  | \$ 6.00  |  |  |
| Exercised                              | (265.8)  | \$ 0.60  |  |  |
| Forfeited                              | (108.0)  | \$ 2.20  |  |  |
| Options outstanding, December 31, 2006 | 1,868.4  | \$ 4.27  |  |  |

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|   |         |    |       |           |        |
|---|---------|----|-------|-----------|--------|
| Granted   | 1,035.6 | \$ | 13.16 |           |        |
| Exercised   | (308.6) | \$ | 1.80  |           |        |
| Forfeited   | (152.2) | \$ | 8.94  |           |        |
|   |         |    |       |           |        |
| Options outstanding, December 31, 2007                  | 2,443.2 | \$ | 8.08  |           |        |
| Granted   | 965.2   | \$ | 10.49 |           |        |
| Exercised   | (225.1) | \$ | 2.48  |           |        |
| Forfeited   | (106.0) | \$ | 9.69  |           |        |
|   |         |    |       |           |        |
| Options outstanding, December 31, 2008                  | 3,077.3 | \$ | 9.19  | 7.9 years | \$ 3.5 |
|   |         |    |       |           |        |
| Vested and unvested expected to vest, December 31, 2008 | 2,914.8 | \$ | 9.09  | 7.9 years | \$ 3.5 |
| Exercisable at December 31, 2008                        | 1,266.3 | \$ | 7.36  | 7.0 years | \$ 2.8 |

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The aggregate intrinsic value of options exercised during the years ended December 31, 2006, 2007 and 2008, was \$2.5 million, \$2.7 million and \$1.9 million, respectively. As of December 31, 2008, the total unrecognized compensation cost related to non-vested stock options granted was \$11.6 million and is expected to be recognized over a weighted average period of 2.4 years. Cash proceeds from stock options exercised during the years ended December 31, 2006, 2007 and 2008 were \$0.2 million, \$0.5 million and \$0.6 million, respectively.

**Restricted Stock Awards** Restricted stock awards are granted subject to certain restrictions, including in some cases service conditions (restricted stock). The grant-date fair value of restricted stock awards, which has been determined based upon the market value of the Company's shares on the grant date, is expensed over the vesting period.

The following table summarizes information on the Company's restricted stock:

|                               | <b>Number of<br/>Shares<br/>(in<br/>thousands)</b> | <b>Restricted Stock<br/>Weighted<br/>Average Grant<br/>Date Fair Value</b> |
|-------------------------------|--|--|
| Unvested at December 31, 2006 | 51.1   | \$ 8.94  |
| Granted                       |  | \$   |
| Vested                        | (16.1)   | \$ 8.88  |
| Forfeited                     |  | \$   |
| Unvested at December 31, 2007 | 35.0   | \$ 8.96  |
| Granted                       |  | \$   |
| Vested                        | (14.4)   | \$ 8.85  |
| Forfeited                     |  | \$   |
| Unvested at December 31, 2008 | 20.6   | \$ 9.04  |

Upon vesting in 2008, 2,640 shares were surrendered to fund minimum statutory tax withholding requirements. There were no restricted stock awards in 2008, 2007 or prior to 2006. As of December 31, 2008, the total unrecognized compensation cost related to unvested restricted stock awards was \$0.2 million. This cost is expected to be recognized over a weighted average period of 1.6 years. The total fair value of restricted stock awards which vested during 2008 was \$0.1 million.

#### **8. 401(k) Plan**

The Company has a 401(k) plan (the Plan) covering all eligible employees and through December 31, 2007, the Company had not made any match of employee contributions. During 2007, the Board of Directors approved a company matching program that began on January 1, 2008. The matching program allows for a company match of up to 5% of salary and bonus paid during the year. The Company's total contribution to the Plan was \$0.5 million for the year ended December 31, 2008.

#### **9. Leases**

##### ***Operating Leases***

The Company leases its facilities in Cranbury, NJ. One of the leases will expire in August 2009 and the other two subleases will expire in February 2012 or on such earlier date upon mutual agreement of both parties. In 2008, the Company entered into a lease agreement for its laboratory and office space in San Diego, CA, which will expire in September 2011.



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At December 31, 2008, aggregate annual future minimum lease payments under these leases are as follows (in thousands):

Operating Leases

Years ending December 31:

|      |          |
|------|----------|
| 2009 | \$ 2,145 |
| 2010 | 1,922    |
| 2011 | 1,839    |
| 2012 | 256      |
| 2013 |          |
|      | \$ 6,162 |

Rent expense for the years ended December 31, 2006, 2007 and 2008 were \$1.6 million, \$1.8 million and \$2.0 million, respectively.

**Capital Lease Facility**

In August 2002, the Company entered into financing agreements that provides for up to \$1 million of equipment financing through August 2004. The facility was increased to \$3 million in May of 2005 and to \$5 million in November 2005. These financing arrangements include interest of approximately 9-12%, and lease terms of 36 or 48 months. Eligible assets under the lease lines include laboratory and scientific equipment, computer hardware and software, general office equipment, furniture, and leasehold improvements.

At December 31, 2006, the total amount available to the Company under these agreements is \$1.4 million. The funding period of the facility expired by its own term in 2007.

The remaining future minimum payments due for all non-cancelable capital leases as of December 31, 2008 are as follows (in thousands):

Capital Leases

Years ending December 31:

|                            |        |
|----------------------------|--------|
| 2009                       | \$ 957 |
| 2010                       | 295    |
| 2011                       | 42     |
| 2012                       |        |
|                            | 1,294  |
| Less payments for interest | (100)  |
| Total principal obligation | 1,194  |
| Less short-term portion    | (877)  |
|                            |        |
| Long-term portion          | \$ 317 |

The capital lease obligation is secured by the related assets financed by the leases.

**10. Income Taxes**

In June 2006, the FASB issued FIN 48 to create a single model to address accounting for uncertainty in tax positions. FIN 48 clarifies the accounting for income taxes, by prescribing a minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. FIN 48 also provides guidance on de-recognition, measurement, and classification of amounts relating to uncertain tax positions, accounting for and disclosure of interest and penalties, accounting in interim periods, disclosures and transition relating to the adoption of the new accounting standard. FIN 48 is effective for fiscal years beginning after December 15, 2006. The Company adopted FIN 48 as of January 1, 2007, as required and determined that the adoption of FIN 48 did not have a material impact on the Company's financial position and results of operations. The Company did not recognize interest or penalties related to income tax during the period ended December 31, 2008 and did not accrue for interest or penalties as of December 31, 2008. The Company does not have an accrual for uncertain tax positions as of December 31, 2008. Tax returns for all years 2002 and thereafter are subject to future examination by tax authorities.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

Deferred income taxes reflect the net effect of temporary difference between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The significant components of the deferred tax assets and liabilities are as follows (in thousands):

|                                    | <b>For Years Ended December 31,</b> |             |             |
|------------------------------------|-------------------------------------|-------------|-------------|
|                                    | <b>2006</b>                         | <b>2007</b> | <b>2008</b> |
| Current deferred tax asset         |                                     |             |             |
| Non-cash stock issue               | \$ 246                              | \$ 283      | \$ 1,560    |
| Others                             | 1,309                               | 1,232       | 141         |
|                                    | 1,555                               | 1,515       | 1,701       |
| Non-current deferred tax assets    |                                     |             |             |
| Amortization/depreciation          | 1,289                               | 1,129       | 2,682       |
| Research tax credit                | 3,611                               | 5,403       | 7,294       |
| Net operating loss carry forwards  | 27,257                              | 42,282      | 36,196      |
| Deferred revenue                   |                                     |             | 19,096      |
| Others                             | 121                                 | 478         | 518         |
| Total deferred tax asset           | 33,833                              | 50,807      | 67,487      |
| Non-current deferred tax liability |                                     |             |             |
| Total net deferred tax asset       | 33,833                              | 50,807      | 67,487      |
| Less valuation allowance           | (33,833)                            | (50,807)    | (67,487)    |
| Net deferred tax asset             | \$                                  | \$          | \$          |

The Company records a valuation allowance for temporary differences for which it is more likely than not that the Company will not receive future tax benefits. At December 31, 2006, 2007, and 2008, the Company recorded valuation allowances of \$33.8 million, \$50.8 million and \$67.5 million, respectively, representing a change in the valuation allowance of \$17.0 million and \$16.7 million for the two previous fiscal year-ends, due to the uncertainty regarding the realization of such deferred tax assets, to offset the benefits of net operating losses generated during those years.

As of December 31, 2008, the Company had federal and state net operating loss carry forwards of approximately \$91 million and \$87 million, respectively. The federal carry forward will begin to expire in 2024 and will end in 2028. The state carry forward will begin to expire in 2012 and will end in 2015.



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**Amicus Therapeutics, Inc.**  
**(a development stage company)**  
**Notes To Consolidated Financial Statements (Continued)**

A reconciliation of the statutory tax rates and the effective tax rates for the years ended December 31, 2006, 2007 and 2008 are as follows:

|                                     | Years Ended December 31, |       |       |
|-------------------------------------|--------------------------|-------|-------|
|                                     | 2006                     | 2007  | 2008  |
| Statutory rate                      | (34)%                    | (34)% | (34)% |
| State taxes, net of federal benefit | (6)                      | (5)   | (5)   |
| Permanent adjustments               | 1                        | 3     | 2     |
| R&D credit                          | (4)                      | (4)   | (5)   |
| Other                               | 2                        | (1)   |       |
| Valuation allowance                 | 41                       | 41    | 42    |
| Net                                 | 0%                       | 0%    | 0%    |

There was no income tax benefit recorded for the years ended December 31, 2006, 2007 or 2008.

**11. Licenses**

The Company acquired rights to develop and commercialize its product candidates through licenses granted by various parties. The following summarizes the Company's material rights and obligations under those licenses:

*Mt. Sinai School of Medicine of New York University (MSSM)* The Company acquired exclusive worldwide patent rights to develop and commercialize Amigal, Plicera and AT2220 and other pharmacological chaperones for the treatment of diseases which can be achieved by enhancing lysosomal enzyme activity pursuant to a license agreement with MSSM. In connection with this agreement, the Company issued 232,266 shares of common stock to MSSM in April 2002. In 2006, the Company amended its license agreement with MSSM to expand its exclusive worldwide patent rights to develop and commercialize pharmacological chaperones. In connection with the amendment, the Company paid \$1.0 million and issued 133,333 shares of its common stock with an estimated fair value of \$1.2 million to MSSM. In total, the Company recorded \$2.2 million of research and development expense in connection with the amendment in 2006. This agreement expires upon expiration of the last of the licensed patent rights, which will be in 2019 if a foreign patent is granted and 2018 otherwise, subject to any patent term extension that may be granted. Under this agreement, the Company has no milestone or future payments other than royalties on net sales. On October 31, 2008, the Company amended and restated its license agreement with MSSM which consolidated previous amendments into a single agreement, clarified the portion of royalties and milestone payments the Company receives from Shire that are payable to MSSM, and provided the Company with the sole right to control the prosecution of patent rights described in the amended and restated license agreement. Under the terms of the amended and restated license agreement, the Company agreed to pay MSSM \$2.6 million in connection with the \$50 million upfront payment that the Company received from Shire in November 2007, which was already accrued for at December 31, 2007 and an additional \$2.6 million paid in the fourth quarter of 2008 for the sole right to and control over the prosecution of patent rights.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

*University of Maryland, Baltimore County* The Company acquired exclusive U.S. patent rights to develop and commercialize Plicera for the treatment of Gaucher disease from the University of Maryland, Baltimore County. Under this agreement, the Company paid upfront and annual license fees of \$30 thousand, which were expensed as research and development expense. The Company is required to make a milestone payment upon the demonstration of safety and efficacy of Plicera for the treatment of Gaucher disease in a Phase 2 study, and another payment upon receiving FDA approval for Plicera for the treatment of Gaucher disease. Upon satisfaction of both milestones, the Company could be required to make up to \$0.2 million in aggregate payments. The Company is also required to pay royalties on net sales. This agreement expires upon expiration of the last of the licensed patent rights in 2015.

*Novo Nordisk A/S* The Company acquired exclusive patent rights to develop and commercialize Plicera for all human indications. Under this agreement, to date the Company paid \$0.4 million in license fees which were expensed as research and development expense. The Company is also required to make milestone payments based on clinical progress of Plicera, with a payment due after initiation of a Phase 2 clinical trial for Plicera for the treatment of Gaucher disease, and a payment due upon each filing for regulatory approval of Plicera for the treatment of Gaucher disease in any of the US, Europe or Japan. An additional payment is due upon approval of Plicera for the treatment of Gaucher disease in the U.S. and a payment is also due upon each approval of Plicera for the treatment of Gaucher disease in either Europe or Japan. Assuming successful development of Plicera for the treatment of Gaucher disease in the U.S., Europe and Japan, total milestone payments would be \$7.8 million. The Company is also required to pay royalties on net sales. This license will terminate in 2016.

Under its license agreements, if the Company owes royalties on net sales for one of its products to more than one of the above licensors, then it has the right to reduce the royalties owed to one licensor for royalties paid to another. The amount of royalties to be offset is generally limited in each license and can vary under each agreement. For Amigal and AT2220, the Company will owe royalties only to MSSM and will owe no milestone payments. The Company expects to pay royalties to all three licensors with respect to Plicera.

The Company's rights with respect to these agreements to develop and commercialize Amigal, Plicera and AT2220 may terminate, in whole or in part, if the Company fails to meet certain development or commercialization requirements or if the Company does not meet its obligations to make royalty payments.

**12. Development and Commercialization Agreement with Shire**

In November 2007, the Company entered into a License and Collaboration Agreement with Shire. Under the agreement, the Company and Shire will jointly develop the Company's three lead pharmacological chaperone compounds for lysosomal storage disorders: Amigal, Plicera and AT2220. The Company granted Shire the rights to commercialize these products outside the U.S. The Company retains all rights to its other programs and to develop and commercialize Amigal, Plicera and AT2220 in the U.S.

The Company received an initial, non-refundable license fee payment of \$50 million from Shire. Joint development costs toward global approval of the three compounds will be shared 50/50 going forward. In addition, the Company is eligible to receive, for all three drug product candidates, aggregate potential milestone payments of up to \$150 million if certain clinical and regulatory milestones are achieved for all three of the programs, and \$240 million in sales-based milestones. The Company will also be eligible to receive tiered double-digit royalties on net sales of the products which are marketed outside of the U.S.

In accordance with the guidance in EITF 00-21, the Company determined that its various deliverables due under the collaboration agreement represent as a single unit of accounting for revenue recognition purposes. The initial, non-refundable upfront license fee payment of \$50 million will be recognized on a straight line basis as Collaboration Revenue over the period of the performance obligations. The Company determined that the period of performance obligations is 18 years as contractually defined.

Under the collaboration agreement, the Company will also receive reimbursement of up to 50% of research and development costs incurred in the development of the products covered by the agreement. The Company will recognize revenue for reimbursed research and development costs in accordance with EITF Issue 99-19 as Research

Revenue when the underlying costs associated with these reimbursable amounts are recorded in research and development expenses since the Company is currently and for the foreseeable future, conducting all of the research activities.

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**Amicus Therapeutics, Inc.**  
**(a development stage company)**

**Notes To Consolidated Financial Statements (Continued)**

The Company recognized Research Revenue of \$1.4 million and \$12.2 million in 2007 and 2008, respectively. The Company also deferred reimbursed research and development costs to the current portion of deferred revenue of \$1.0 million and \$0.9 million at December 31, 2007 and December 31, 2008, respectively.

The Company recognized Collaboration Revenue related to the \$50 million upfront license fee payment from Shire of \$0.4 million and \$2.8 million in 2007 and 2008, respectively. The Company also classified \$2.8 million of the deferred revenue as current and \$46.8 million as long-term at December 31, 2007 and classified \$2.8 million as current and \$44.0 million as long-term at December 31, 2008.

**13. Selected Quarterly Financial Data** (Unaudited in thousands except per share data)

|   | <b>Quarters Ended</b> |                |                     |                    |
|---|-----------------------|----------------|---------------------|--------------------|
|   | <b>March 31</b>       | <b>June 30</b> | <b>September 30</b> | <b>December 31</b> |
| <b>2007</b>                                     |                       |                |                     |                    |
| Net loss  | \$ (9,695)            | \$ (9,396)     | \$ (10,303)         | \$ (11,773)        |
| Net loss attributable to common stockholders    | (9,736)               | (9,706)        | (10,303)            | (11,773)           |
| Basic and diluted net loss per common share (1) | (10.21)               | (1.37)         | (0.46)              | (0.53)             |
| <b>2008</b>                                     |                       |                |                     |                    |
| Net loss  | (7,731)               | (9,294)        | (8,180)             | (14,150)           |
| Net loss attributable to common stockholders    | (7,731)               | (9,294)        | (8,180)             | (14,150)           |
| Basic and diluted net loss per common share (1) | (0.34)                | (0.41)         | (0.36)              | (0.63)             |

(1) Per common share amounts for the quarters and full years have been calculated separately. Accordingly, quarterly amounts do not add to the annual amounts because of differences on the weighted-average common shares outstanding during each period principally due to the effect of the Company's issuing shares of its common stock during the year.



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**Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.**

None.

**Item 9A. CONTROLS AND PROCEDURES.**

**Evaluation of Disclosure Controls and Procedures**

Rule 13a-15(e) under the Securities and Exchange Act of 1934, as amended (the Exchange Act ), defines the term disclosure controls and procedures as those controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission (SEC) rules and forms and that such information is accumulated and communicated to the company s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation as of December 31, 2008, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures (as defined by Rules 13a-15(e) and 15d-15(e) under the Exchange Act) were effective as of December 31, 2008.

There have been no changes in our internal controls over financial reporting during the fourth quarter of the year ended December 31, 2008 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

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

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2008.

In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on our assessment we believe that, as of December 31, 2008, our internal control over financial reporting is effective based on those criteria.

This Annual Report on Form 10-K does not include an attestation report of the Company s registered public accounting firm regarding internal control over financial reporting. Management s report was not subject to attestation by the Company s registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the Company to provide only management s report in this Annual Report.

**Item 9B. OTHER INFORMATION.**

None.

**Table of Contents****PART III**

Certain information required by Part III is omitted from this Annual Report on Form 10-K as we intend to file our definitive proxy statement for our 2009 annual meeting of stockholders, pursuant to Regulation 14A of the Securities Exchange Act, not later than 120 days after the end of the fiscal year covered by this Annual Report of Form 10-K, and certain information to be included in the proxy statement is incorporated herein by reference.

**Item 10. DIRECTORS, EXECUTIVE OFFICERS OF THE REGISTRANT AND CORPORATE GOVERNANCE.****Executive Officers**

The following table sets forth certain information regarding our current executive officers as of February 1, 2009.

*John F. Crowley* has served as President and Chief Executive Officer since January 2005, and has also served as a Director of Amicus since August 2004, with the exception of the period from September 2006 to March 2007 when he was not an officer or director of Amicus while he was in active duty service in the United States Navy (Reserve). He was President and Chief Executive Officer of Orexigen Therapeutics, Inc. from September 2003 to December 2004. Mr. Crowley was President and Chief Executive Officer of Novazyme Pharmaceuticals, Inc., from March 2000 until that company was acquired by Genzyme Corporation in September 2001; thereafter he served as Senior Vice President of Genzyme Therapeutics until December 2002. Mr. Crowley received a B.S. degree in Foreign Service from Georgetown University's School of Foreign Service, a J.D. from the University of Notre Dame Law School, and an M.B.A. from Harvard Business School.

*Matthew R. Patterson* has served as Chief Operating Officer since September 2006. From December 2004 to September 2006 he served as Chief Business Officer. From 1998-2004, Mr. Patterson worked at BioMarin Pharmaceutical Inc. where he was Vice President, Regulatory and Government Affairs from 2001 to 2003 and later Vice President, Commercial Planning from 2003-2004. From 1993-1998, Mr. Patterson worked at Genzyme Corporation in Regulatory Affairs and Manufacturing. Mr. Patterson received a B.A. in Biochemistry from Bowdoin College.

*James E. Dentzer* has served as Chief Financial Officer since October 2006. From November 2003 to October 2006, Mr. Dentzer was Corporate Controller at Biogen Idec Inc. From 2001 until the 2003 merger of Biogen, Inc. and IDEC Pharmaceuticals Corporation, Mr. Dentzer served as Corporate Controller of Biogen, Inc. Prior to that, he served in a variety of financial positions at E. I. du Pont de Nemours and Company, most recently as Chief Financial Officer of DuPont Flooring Systems. Mr. Dentzer received his B.A. from Boston College and his M.B.A. from the University of Chicago.

*David J. Lockhart*, Ph.D., has served as Chief Scientific Officer since January 2006. Prior to joining Amicus, Dr. Lockhart served as President, Chief Scientific Officer and co-founder of Ambit Biosciences, a biotechnology company specializing in small molecule kinase inhibitors, from March 2001 to July 2005. Dr. Lockhart served as a consultant to Ambit Biosciences from August 2000 to March 2001, and as a visiting scholar at the Salk Institute for Biological Studies from October 2000 to March 2001. Prior to that, Dr. Lockhart served in various positions, including Vice President of Genomics Research at Affymetrix, and was the Director of Genomics at the Genomics Institute of the Novartis Research Foundation from February 1999 to July 2000. He received his Ph.D. from Stanford University and was a post-doctoral fellow at the Whitehead Institute for Biomedical Research at the Massachusetts Institute of Technology.

*David Palling*, Ph.D., has served as Senior Vice President, Drug Development, since August, 2002. From September 1998 until August, 2002, Dr. Palling was with Johnson & Johnson, most recently serving as Vice President of Worldwide Assay Research and Development at Ortho Clinical Diagnostics, a subsidiary of Johnson & Johnson. Dr. Palling received B.Sc. and Ph.D. degrees in Chemistry from the University of London, King's College and conducted post-doctoral research in Biochemistry at Brandeis University.

*Gregory P. Licholai*, M.D., has served as Vice President, Medical Affairs since December 2004. From November 2002 to December 2004, Dr. Licholai was with Domain Associates, a venture capital firm. From September 2000 to November 2002, he was director of Ventures and Business Associates for Medtronic Neurological, a division of Medtronic, Inc. Dr. Licholai received his B.A. from Boston College and completed Pre-Medical studies at Columbia University, his M.D. from Yale Medical School and his M.B.A. from Harvard Business School.

*S. Nicole Schaeffer* has served as Vice President, Human Resources and Leadership Development since March 2005. From 2001 to 2004, she served as Senior Director, Human Resources, for three portfolio companies of Flagship Ventures, a venture capital firm, and in that capacity she managed human resources for three life sciences companies. Ms. Schaeffer received her B.A. from the University of Rochester and her M.B.A. from Boston University.



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*Bradley L. Campbell* has served as Vice President, Business Planning since May 2007. From April 2006 until May 2007, he served as Senior Director, Business Development. From 2002 until 2006, Mr. Campbell served as Senior Product Manager and later Business Director of CV Gene Therapy at Genzyme Corporation. Mr. Campbell received his B.A. from Duke University and his M.B.A. from Harvard Business School.

*John R. Kirk* has served as Vice President, Regulatory Affairs since January 1, 2008. Prior to joining Amicus, Mr. Kirk served as Executive Director, Regulatory Affairs at Aegerion Pharmaceuticals. From 2003 to 2007, Mr. Kirk held positions of increasing responsibility with Esperion Therapeutics which was acquired during this time by Pfizer. From 2000 to 2002, Mr. Kirk was Director, Worldwide Regulatory Affairs for Pfizer Global Research and Development. From 1988 to 2000, Mr. Kirk held various Regulatory positions with Parke-Davis Pharmaceutical Research. Mr. Kirk holds both his M.S. and B.S. from Wright State University in Ohio.

*Andrew Shenker, M.D., Ph.D.*, has served as Vice President, Clinical Research since December 2007. From 2002 to 2007, Dr. Shenker was with Bristol-Myers Squibb where he served most recently as Medical Director in the Clinical Discovery Group. From 1995 to 2002, Dr. Shenker was Assistant Professor of Pediatrics, Molecular Pharmacology and Biological Chemistry at Northwestern University Medical School. Dr. Shenker obtained his Ph.D. in pharmacology and M.D. from the Mount Sinai School of Medicine in NYC, completed his internship and residency in Pediatrics at the Johns Hopkins Hospital and was a post-doctoral fellow at the National Institutes of Health.

*Geoffrey P. Gilmore* has served as Senior Vice President, General Counsel and Secretary since March 2008. Prior to joining Amicus, from 2003 to 2008, Mr. Gilmore was in the Law Department at Bristol-Myers Squibb Company, where most recently he served as Vice President and Senior Counsel. From 2002 to 2003, Mr. Gilmore was a Senior Attorney at Wyeth Pharmaceuticals. From 1997 to 2002, Mr. Gilmore held various positions in the law department of Bristol Myers Squibb Company. Prior to joining Bristol-Myers Squibb Company, Mr. Gilmore was an associate with the law firms, Ballard Spahr Andrews & Ingersoll, LLP, where he practiced in the Business and Finance Group, and Montgomery, McCracken, Walker & Rhoads, LLP, where he practiced in the Corporate & Securities Group. Mr. Gilmore received his B.A. from Franklin and Marshall College, and his J.D. from University of Michigan Law School.

*Pol F. Boudes, M.D.*, has served as Chief Medical Officer since January 2009. Prior to joining Amicus, from 2004 to 2009, Dr. Boudes served as Head of Medical Development, US and Executive Director, Gynecology & Andrology at Bayer HealthCare Pharmaceuticals (formerly Berlex, Inc.). From 1996 to 2003, Dr. Boudes was Project Director, Senior Director, and Assistant Vice-President Worldwide Clinical Research, Women's Health and Bone, and Internal Medicine at Wyeth Research. From 1991 to 1996 Dr. Boudes was Clinical Research Physician then Senior Clinical Research Physician and Global Clinical Leader, Virology at Hoffman-La Roche. From 1990 to 1991, Dr. Boudes was Global Project Manager, Immunology at Pasteur Merieux (now Sanofi Pasteur). Dr. Boudes practiced medicine and held academic appointments at University Hospitals (Marseille and Paris), the Paris Faculty of Medicine, the French Society of Internal Medicine and French Health Agencies. Dr. Boudes received B.S. and M.D. degrees from the University of Marseille, France and he is Board-certified in Geriatric Diseases, Internal Medicine, Endocrinology and Metabolic Diseases.

The other information required by this item is incorporated by reference from the definitive proxy statement which Amicus will file with the Securities and Exchange Commission no later than 120 days after December 31, 2008 (the Proxy Statement ), under the captions Election of Directors and Section 16(a) Beneficial Ownership Reporting Compliance.

In 2007, we adopted a Code of Business Ethics and Conduct for Employees, Executive Officers and Directors that applies to our employees, officers and directors and incorporates guidelines designed to deter wrongdoing and to promote the honest and ethical conduct and compliance with applicable laws and regulations. In addition, the code of ethics incorporates our guidelines pertaining to topics such as conflicts of interest and workplace behavior. We have posted the text of our code on our website at [www.amicustherapeutics.com](http://www.amicustherapeutics.com) in connection with Investors/Corporate Governance materials. In addition, we intend to promptly disclose (1) the nature of any amendment to our code of ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (2) the nature of any waiver, including an implicit waiver, from provision of our code of ethics that is granted to one of these specified officers, the name of such person who is

granted the waiver and the date the waiver on our website in the future.

**Item 11. EXECUTIVE COMPENSATION.**

The information required by this item is incorporated by reference from the Proxy Statement under the caption Executive Compensation Compensation Discussion and Analysis.

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**Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.**

The information required by this item is incorporated by reference from the Proxy Statement under the captions Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters and Equity Compensation Plan Information.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE.**

The information required by this item is incorporated by reference from the Proxy Statement under the captions Certain Relationships and Related Transactions, Director Independence, Committee Compensation and Meetings of the Board of Directors, and Compensation Committee Interlock and Insider Participation.

**Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.**

The information required by this item is incorporated by reference from the Proxy Statement under the caption Ratification of Independent Registered Public Accounting Firm.

**Table of Contents****PART IV****Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE.***(a) 1. Consolidated Financial Statements*

The Consolidated Financial Statements are filed as part of this report.

*2. Consolidated Financial Statement Schedules*

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

*3. Exhibits*

| <b>Exhibit No.</b> | <b>Filed Exhibit Description</b>   | <b>Incorporated by Reference to SEC Filing Form</b> | <b>Reference to SEC Filing Date</b> | <b>Exhibit No.</b> | <b>Filed with this Form 10-K</b> |
|--------------------|--|---|-------------------------------------|--------------------|----------------------------------|
| 3.1                | Restated Certificate of Incorporation of the Registrant.   | S-1 (333-141700)                                    | 5/17/07                             | 3.2                |                                  |
| 3.2                | Restated By-laws of the Registrant.  | S-1/A (333-141700)                                  | 4/27/07                             | 3.4                |                                  |
| 4.1                | Specimen Stock Certificate evidencing shares of common stock   | S-1 (333-141700)                                    | 3/30/07                             | 4.1                |                                  |
| 4.2                | Third Amended and Restated Investor Rights Agreement, dated as of September 13, 2006, as amended   | S-1 (333-141700)                                    | 3/30/07                             | 4.3                |                                  |
| 10.1               | 2002 Equity Incentive Plan, as amended, and forms of option agreements thereunder  | S-1/A (333-141700)                                  | 4/27/07                             | 10.1               |                                  |
| 10.2               | 2007 Equity Incentive Plan and forms of option agreements  | S-1/A (333-141700)                                  | 5/17/07                             | 10.2               |                                  |
| ++10.3             | Amended and Restated License Agreement, dated October, 31, 2008, by and between the Registrant and Mount Sinai School of Medicine of New York University |   |                                     |                    | X                                |
| +10.4              | License Agreement, dated as of June 26, 2003, by and between the Registrant and University of Maryland, Baltimore County, as amended                     | S-1 (333-141700)                                    | 3/30/07                             | 10.4               |                                  |
| +10.5              | Exclusive License Agreement, dated as of June 8, 2005, by and between the Registrant and Novo Nordisk, A/S   | S-1 (333-141700)                                    | 3/30/07                             | 10.5               |                                  |
| 10.6               | Sublease Agreement, dated as of May 12, 2005, by and between the Registrant and Purdue Pharma, L.P.  | S-1 (333-141700)                                    | 3/30/07                             | 10.6               |                                  |
| 10.7               | Amended and Restated Employment Agreement, dated as of December 30, 2008, by and between the Registrant and John F. Crowley                              | Form 8-K Current Report                             | 12/31/08                            | 10.1               |                                  |
| 10.8               | Letter Agreement, dated as of November 9, 2004, by and between the Registrant and Matthew R.   | S-1 (333-141700)                                    | 3/30/07                             | 10.8               |                                  |

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|       |   |                       |         |       |
|-------|---|-----------------------|---------|-------|
|       | Patterson   |                       |         |       |
| 10.9  | Letter Agreement, dated as of July 27, 2006, by and between the Registrant and James E. Dentzer                     | S-1 (333-141700)      | 3/30/07 | 10.9  |
| 10.10 | Letter Agreement, dated as of December 19, 2005, by and between the Registrant and David Lockhart, Ph.D.            | S-1 (333-141700)      | 3/30/07 | 10.10 |
| 10.11 | Consulting Agreement, dated as of February 28, 2006, by and between the Registrant and Donald J. Hayden, Jr.        | S-1 (333-141700)      | 3/30/07 | 10.15 |
| 10.12 | Form of Director and Officer Indemnification Agreement  | S-1 (333-141700)      | 3/30/07 | 10.17 |
| 10.13 | Employment Agreement, dated as of September 11, 2006, by and between the Registrant and Donald J. Hayden, Jr.       | S-1/A<br>(333-141700) | 4/27/07 | 10.19 |
| 10.14 | Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and James E. Dentzer           | S-1/A<br>(333-141700) | 4/27/07 | 10.20 |
| 10.15 | Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and Glenn P. Sblendorio        | S-1/A<br>(333-141700) | 4/27/07 | 10.21 |
| 10.16 | Lease Agreement, dated as of July 31, 2006, by and between the Registrant and Cedar Brook II Corporate Center, L.P. | S-1/A<br>(333-141700) | 4/27/07 | 10.22 |

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| <b>Exhibit No.</b> | <b>Filed Exhibit Description</b>   | <b>Incorporated by Reference to SEC Filing Form</b> | <b>Date</b> | <b>SEC Filing Exhibit No.</b> | <b>Filed with this Form 10-K</b> |
|--------------------|--|---|-------------|-------------------------------|----------------------------------|
| 10.17              | 2007 Director Option Plan and form of option agreement   | S-1/A<br>(333-141700)                               | 5/17/07     | 10.23                         |                                  |
| 10.18              | 2007 Employee Stock Purchase Plan  | S-1/A<br>(333-141700)                               | 5/17/07     | 10.24                         |                                  |
| 10.19              | Amicus Therapeutics, Inc. 2007 Amended and Restated Equity Incentive Plan  | Form 8-K<br>Current Report                          | 6/12/08     | 10.1                          |                                  |
| 10.20              | Lease Agreement dated as of September 11, 2008 by and between the Registrant and A/G Touchstone, TP, LLC.                                | Form 8-K<br>Current Report                          | 9/15/08     | 10.1                          |                                  |
| +10.21             | License and Collaboration Agreement, dated as of November 7, 2007, by and between the Registrant and Shire Pharmaceuticals Ireland, Ltd. | Form 10-K<br>Annual Report                          | 2/08/08     | 10.20                         |                                  |
| 10.22              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and David Lockhart, Ph.D.                                 | Form 8-K<br>Current Report                          | 12/31/08    | 10.4                          |                                  |
| 10.23              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and James E. Dentzer                                      | Form 8-K<br>Current Report                          | 12/31/08    | 10.2                          |                                  |
| 10.24              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Matthew R. Patterson                                  | Form 8-K<br>Current Report                          | 12/31/08    | 10.3                          |                                  |
| 10.25              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and David Palling, Ph.D.                                  |   |             |                               | X                                |
| 10.26              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Bradley L. Campbell                                   |   |             |                               | X                                |
| 10.27              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Gregory P. Licholai, M.D.                             | Form 8-K<br>Current Report                          | 12/31/08    | 10.5                          |                                  |
| 10.28              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and S. Nicole Schaeffer                                   |   |             |                               | X                                |
| 10.29              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and John R. Kirk  |   |             |                               | X                                |
| 10.30              |  |   |             |                               | X                                |

|                 |   |   |
|-----------------|---|---|
|                 | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Andrew Shenker, M.D., Ph.D.  |   |
| 10.31           | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Geoffrey P. Gilmore  | X |
| 23.1            | Consent of Independent Registered Public Accounting Firm.   | X |
| 31.1            | Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.   | X |
| 31.2            | Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934.   | X |
| 32.1            | Certificate of Principal Executive Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.                                    | X |
| 32.2            | Certificate of Principal Financial Officer pursuant to 18 U.S.C. Section 1350 and Section 906 of the Sarbanes-Oxley Act of 2002.                                    | X |
| + Confidential  | treated has been granted as to certain portions of the document, which portions have been omitted and filed separately with the Securities and Exchange Commission. |   |
| ++ Confidential | treated has been requested as to certain portions of the document, which portions have been omitted and filed separately with the                                   |   |

Securities and  
Exchange  
Commission.



**Table of Contents****SIGNATURES**

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on February 4, 2009.

AMICUS THERAPEUTICS, INC.  
(Registrant)

By: /s/ John F. Crowley  
John F. Crowley  
*Chief Executive Officer*

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

| <b>Signature</b>  | <b>Title</b>  | <b>Date</b>      |
|---|---|------------------|
| /s/ John F. Crowley<br>(John F. Crowley)                          | Chief Executive Officer<br>(Principal Executive Officer)                | February 4, 2009 |
| /s/ James E. Dentzer<br>(James E. Dentzer)                        | Chief Financial Officer<br>(Principal Financial and Accounting Officer) | February 4, 2009 |
| /s/ Donald J. Hayden<br>(Donald J. Hayden)                        | Chairman of the Board   | February 4, 2009 |
| /s/ Alexander E. Barkas,<br>Ph.D.<br>(Alexander E. Barkas, Ph.D.) | Director  | February 4, 2009 |
| /s/ Stephen Bloch, M.D.<br>(Stephen Bloch, M.D.)                  | Director  | February 4, 2009 |
| /s/ P. Sherrill Neff<br>(P. Sherrill Neff)                        | Director  | February 4, 2009 |
| /s/ Michael G. Raab<br>(Michael G. Raab)                          | Director  | February 4, 2009 |
| /s/ Glenn Sblendorio<br>(Glenn Sblendorio)                        | Director  | February 4, 2009 |

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/s/ James N. Topper, M.D., Director  
Ph.D.

February 4, 2009

(James N. Topper, M.D.,  
Ph.D.)

/s/ Sol J. Barer, Ph.D. Director

February 4, 2009

(Sol J. Barer, Ph.D.)

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| <b>Exhibit No.</b> | <b>Filed Exhibit Description</b>   | <b>Incorporated by Reference to SEC Filing Form</b> | <b>Date</b> | <b>Exhibit No.</b> | <b>Filed with this Form 10-K</b> |
|--------------------|--|---|-------------|--------------------|----------------------------------|
| 3.1                | Restated Certificate of Incorporation of the Registrant.   | S-1 (333-141700)                                    | 5/17/07     | 3.2                |                                  |
| 3.2                | Restated By-laws of the Registrant.  | S-1/A (333-141700)                                  | 4/27/07     | 3.4                |                                  |
| 4.1                | Specimen Stock Certificate evidencing shares of common stock   | S-1 (333-141700)                                    | 3/30/07     | 4.1                |                                  |
| 4.2                | Third Amended and Restated Investor Rights Agreement, dated as of September 13, 2006, as amended   | S-1 (333-141700)                                    | 3/30/07     | 4.3                |                                  |
| 10.1               | 2002 Equity Incentive Plan, as amended, and forms of option agreements thereunder  | S-1/A (333-141700)                                  | 4/27/07     | 10.1               |                                  |
| 10.2               | 2007 Equity Incentive Plan and forms of option agreements  | S-1/A (333-141700)                                  | 5/17/07     | 10.2               |                                  |
| ++10.3             | Amended and Restated License Agreement, dated October, 31, 2008, by and between the Registrant and Mount Sinai School of Medicine of New York University |   |             |                    | X                                |
| +10.4              | License Agreement, dated as of June 26, 2003, by and between the Registrant and University of Maryland, Baltimore County, as amended                     | S-1 (333-141700)                                    | 3/30/07     | 10.4               |                                  |
| +10.5              | Exclusive License Agreement, dated as of June 8, 2005, by and between the Registrant and Novo Nordisk, A/S   | S-1 (333-141700)                                    | 3/30/07     | 10.5               |                                  |
| 10.6               | Sublease Agreement, dated as of May 12, 2005, by and between the Registrant and Purdue Pharma, L.P.  | S-1 (333-141700)                                    | 3/30/07     | 10.6               |                                  |
| 10.7               | Amended and Restated Employment Agreement, dated as of December 30, 2008, by and between the Registrant and John F. Crowley                              | Form 8-K<br>Current Report                          | 12/31/08    | 10.1               |                                  |
| 10.8               | Letter Agreement, dated as of November 9, 2004, by and between the Registrant and Matthew R. Patterson   | S-1 (333-141700)                                    | 3/30/07     | 10.8               |                                  |
| 10.9               |  | S-1 (333-141700)                                    | 3/30/07     | 10.9               |                                  |

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|        |  |                            |          |       |
|--------|--|----------------------------|----------|-------|
|        | Letter Agreement, dated as of July 27, 2006, by and between the Registrant and James E. Dentzer  |                            |          |       |
| 10.10  | Letter Agreement, dated as of December 19, 2005, by and between the Registrant and David Lockhart, Ph.D.                                 | S-1 (333-141700)           | 3/30/07  | 10.10 |
| 10.11  | Consulting Agreement, dated as of February 28, 2006, by and between the Registrant and Donald J. Hayden, Jr.                             | S-1 (333-141700)           | 3/30/07  | 10.15 |
| 10.12  | Form of Director and Officer Indemnification Agreement   | S-1 (333-141700)           | 3/30/07  | 10.17 |
| 10.13  | Employment Agreement, dated as of September 11, 2006, by and between the Registrant and Donald J. Hayden, Jr.                            | S-1/A (333-141700)         | 4/27/07  | 10.19 |
| 10.14  | Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and James E. Dentzer                                | S-1/A (333-141700)         | 4/27/07  | 10.20 |
| 10.15  | Restricted Stock Agreement, dated as of March 8, 2007, by and between the Registrant and Glenn P. Sblendorio                             | S-1/A (333-141700)         | 4/27/07  | 10.21 |
| 10.16  | Lease Agreement, dated as of July 31, 2006, by and between the Registrant and Cedar Brook II Corporate Center, L.P.                      | S-1/A (333-141700)         | 4/27/07  | 10.22 |
| 10.17  | 2007 Director Option Plan and form of option agreement   | S-1/A (333-141700)         | 5/17/07  | 10.23 |
| 10.18  | 2007 Employee Stock Purchase Plan  | S-1/A (333-141700)         | 5/17/07  | 10.24 |
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| +10.21 | License and Collaboration Agreement, dated as of November 7, 2007, by and between the Registrant and Shire Pharmaceuticals Ireland, Ltd. | Form 10-K<br>Annual Report | 2/08/08  | 10.20 |
| 10.22  | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and David Lockhart, Ph.D.                                 | Form 8-K<br>Current Report | 12/31/08 | 10.4  |

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|       |   |                            |          |      |
|-------|---|----------------------------|----------|------|
| 10.23 | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and James E. Dentzer | Form 8-K<br>Current Report | 12/31/08 | 10.2 |
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| 10.30              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Andrew Shenker, M.D., Ph.D.  |  |                        |                               | X                                |
| 10.31              | Letter Agreement, dated as of December 30, 2008, by and between the Registrant and Geoffrey P. Gilmore          |  |                        |                               | X                                |
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| 31.1               | Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934. |  |                        |                               | X                                |
| 31.2               | Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934. |  |                        |                               | X                                |
| 32.1               | Certificate of Principal Executive Officer pursuant to 18   |  |                        |                               | X                                |

|      |   |   |
|------|---|---|
| 32.2 | U.S.C. Section 1350 and<br>Section 906 of the<br>Sarbanes-Oxley Act of 2002.<br>Certificate of Principal Financial<br>Officer pursuant to 18 U.S.C.<br>Section 1350 and Section 906 of<br>the Sarbanes-Oxley Act of 2002. | X |
| +    | Confidential<br>treated has been<br>granted as to<br>certain portions<br>of the<br>document,<br>which portions<br>have been<br>omitted and<br>filed separately<br>with the<br>Securities and<br>Exchange<br>Commission.   |   |
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