

Prothena Corp plc  
Form 10-Q  
May 05, 2014

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

---

FORM 10-Q

---

(Mark One)

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

For the quarterly period ended March 31, 2014

Or

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

Commission file number: 001-35676

---

PROTHENA CORPORATION PUBLIC LIMITED COMPANY  
(Exact name of registrant as specified in its charter)

---

Ireland 98-1111119  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification Number)

650 Gateway Boulevard 94080  
South San Francisco, California (Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (650) 837-8550

---

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions 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  (Do not check if a smaller reporting company) Smaller reporting company

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

---

The number of ordinary shares outstanding as of April 25, 2014 was 21,904,780.

---

PROTHENA CORPORATION plc  
Form 10Q – QUARTERLY REPORT  
For the Quarter Ended March 31, 2014  
TABLE OF CONTENTS

	Page
<u>PART I. FINANCIAL INFORMATION</u>	<u>1</u>
<u>Item 1. Financial Statements (unaudited)</u>	<u>1</u>
<u>Condensed Consolidated Balance Sheets as of March 31, 2014 and December 31, 2013</u>	<u>1</u>
<u>Condensed Consolidated Statements of Operations for the three months ended March 31, 2014 and 2013</u>	<u>2</u>
<u>Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2014 and 2013</u>	<u>3</u>
<u>Notes to Condensed Consolidated Financial Statements</u>	<u>4</u>
<u>Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>18</u>
<u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u>	<u>27</u>
<u>Item 4. Controls and Procedures</u>	<u>28</u>
 <u>PART II. OTHER INFORMATION</u>	 <u>29</u>
<u>Item 1. Legal Proceedings</u>	<u>29</u>
<u>Item 1A. Risk Factors</u>	<u>29</u>
<u>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>50</u>
<u>Item 3. Defaults Upon Senior Securities</u>	<u>50</u>
<u>Item 4. Mine Safety Disclosures</u>	<u>51</u>
<u>Item 5. Other Information</u>	<u>52</u>
<u>Item 6. Exhibits</u>	<u>52</u>
 <u>SIGNATURES</u>	 <u>52</u>
 <u>EXHIBIT INDEX</u>	 <u>53</u>

---

## PART I. FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

Prothena Corporation plc and Subsidiaries  
 Condensed Consolidated Balance Sheets  
 (in thousands, except share and per share data)  
 (unaudited)

	March 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	\$195,052	\$176,677
Receivable from Roche	2,161	—
Receivable from related party	46	58
Deferred tax assets	77	81
Prepaid expenses and other current assets	2,262	1,406
Total current assets	199,598	178,222
Non-current assets:		
Property and equipment, net	3,233	3,372
Deferred tax assets	979	816
Total non-current assets	4,212	4,188
Total assets	\$203,810	\$182,410
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$2,128	\$1,790
Accrued research and development	4,359	1,542
Income taxes payable	—	184
Other current liabilities	2,477	3,890
Total current liabilities	8,964	7,406
Non-current liabilities:		
Deferred rent	1,835	1,734
Total liabilities	10,799	9,140
Commitments and contingencies (Note 6)		
Shareholders' equity:		
Euro deferred shares, €22 nominal value:	—	—
Authorized shares — 10,000 at March 31, 2014 and December 31, 2013		
Issued and outstanding shares — none at March 31, 2014 and December 31, 2013		
Ordinary shares, \$0.01 par value:		
Authorized shares — 100,000,000 at March 31, 2014 and December 31, 2013		
Issued and outstanding shares — 21,904,780 and 21,856,261 at March 31, 2014 and December 31, 2013, respectively		
Additional paid-in capital	216,281	214,392
Accumulated deficit	(23,489	) (41,341
Total shareholders' equity	193,011	173,270
Total liabilities and shareholders' equity	\$203,810	\$182,410
See accompanying Notes to Condensed Consolidated Financial Statements.		

Prothena Corporation plc and Subsidiaries  
Condensed Consolidated Statements of Operations  
(in thousands, except per share data)  
(unaudited)

	Three Months Ended March 31,	
	2014	2013
Collaboration revenue	\$32,096	\$—
Revenue—related party	138	171
Total revenue	32,234	171
Operating expenses:		
Research and development	9,342	5,957
General and administrative	4,873	3,181
Total operating expenses	14,215	9,138
Income (loss) from operations	18,019	(8,967 )
Other income (expense):		
Interest income	19	22
Other income (expense), net	(35 )	—
Total other income (expense)	(16 )	22
Income (loss) before income taxes	18,003	(8,945 )
Provision for income taxes	151	6
Net income (loss)	\$17,852	\$(8,951 )
Net income (loss) per share attributable to holders of ordinary shares		
Basic	\$0.82	\$(0.51 )
Diluted	\$0.78	\$(0.51 )
Shares used to compute net income (loss) per share attributable to holders of ordinary shares		
Basic	21,884	17,679
Diluted	22,942	17,679

See accompanying Notes to Condensed Consolidated Financial Statements.

Prothena Corporation plc and Subsidiaries  
Condensed Consolidated Statements of Cash Flows  
(in thousands)  
(unaudited)

	Three Months Ended March 31,	
	2014	2013
Operating activities		
Net income (loss)	\$17,852	\$(8,951 )
Adjustments to reconcile net income (loss) to cash provided by (used in) operating activities:		
Depreciation and amortization	175	137
Share-based compensation	1,343	340
Excess tax benefit from share-based award exercises	(207 )	—
Deferred income taxes	(159 )	—
Changes in operating assets and liabilities:		
Receivable from Roche	(2,161 )	—
Receivable from related party	12	(38 )
Other assets	(707 )	(271 )
Accounts payable, accruals and other liabilities	1,746	3,680
Net cash provided by (used in) operating activities	17,894	(5,103 )
Investing activities		
Purchases of property and equipment	(26 )	(110 )
Net cash used in investing activities	(26 )	(110 )
Financing activities		
Post separation adjustments to the funding provided by Elan	—	(84 )
Proceeds from issuance of ordinary shares upon exercise of stock options	310	—
Excess tax benefit from share-based award exercises	207	—
Public offering costs	(10 )	—
Net cash provided by (used in) financing activities	507	(84 )
Net increase (decrease) in cash and cash equivalents	18,375	(5,297 )
Cash and cash equivalents, beginning of the year	176,677	124,860
Cash and cash equivalents, end of the period	\$195,052	\$119,563
Supplemental disclosures of cash flow information		
Cash paid for income taxes, net of refunds	\$436	\$23
Supplemental disclosures of non-cash investing and financing activities		
Acquisition of property and equipment under accounts payable and accrued liabilities	\$10	\$—
Accrued deferred offering costs	\$43	\$—
See accompanying Notes to Condensed Consolidated Financial Statements.		

Notes to the Condensed Consolidated Financial Statements  
(unaudited)

1. Organization

Description of Business

Prothena Corporation plc and subsidiaries (“Prothena” or the “Company”) is a clinical stage biotechnology company focused on the discovery, development and commercialization of novel antibodies for the potential treatment of diseases that involve protein misfolding or cell adhesion. The Company is focused on therapeutic monoclonal antibodies directed specifically to disease causing proteins. The Company's antibody-based product candidates target a number of potential indications including AL and AA forms of amyloidosis (NEOD001), Parkinson’s disease and other related synucleinopathies (PRX002) and novel cell adhesion targets involved in inflammatory diseases and cancers (PRX003). The Company's strategy is to identify antibody candidates for clinical development by applying its extensive expertise in generating novel therapeutic antibodies and working with collaborators having expertise in specific animal models of disease.

The Company is a public limited company formed under the laws of Ireland. The Company separated from Elan Corporation Limited, formerly Elan Corporation, plc (“Elan”), which was subsequently acquired by Perrigo Company plc (“Perrigo”), on December 20, 2012. Prothena's business consists of a substantial portion of Elan's former drug discovery business platform, including Neotope Biosciences Limited and its wholly owned subsidiaries Onclave Therapeutics Limited and Prothena Biosciences Inc (which for the period prior to separation and distribution are referred to herein as the “Prothena Business”). Prior to December 21, 2012, the Prothena Business operated as part of Elan and not as a separate stand-alone entity. After the separation from Elan, and the related distribution of the Company's ordinary shares to Elan’s shareholders (the “Separation and Distribution”), the Company's ordinary shares commenced trading on The NASDAQ Global Market under the symbol “PRTA” on December 21, 2012 and currently trade on The NASDAQ Global Select Market.

Liquidity and Business Risks

As of March 31, 2014, the Company had an accumulated deficit of \$23.5 million and cash and cash equivalents of \$195.1 million, respectively. Based on the Company's business plans, management believes that the Company's cash and cash equivalents at March 31, 2014 are sufficient to meet its obligations for at least the next twelve months. To operate beyond such period, or if the Company elects to increase its spending on development programs significantly above current long-term plans or enters into potential licenses and or other acquisitions of complementary technologies, products or companies, the Company may need additional capital. The Company expects to continue to finance future cash needs that exceed its operating activities primarily through its current cash and cash equivalents, and to the extent necessary, through proceeds from public or private equity or debt financings, loans and collaborative agreements with corporate partners or other arrangements. In October 2013, the Company sold an aggregate of 4,177,079 ordinary shares for net proceeds of approximately \$84.5 million, after deducting the underwriting discount and estimated offering expenses, in an underwritten public offering.

The Company is subject to a number of risks, including but not limited to: the uncertainty of the Company's research and development (“R&D”) efforts resulting in future successful commercial products; obtaining regulatory approval for new products; its ability to successfully commercialize its product candidates, if approved; significant competition from larger organizations; reliance on the proprietary technology of others; dependence on key personnel; uncertain patent protection; dependence on corporate partners and collaborators; and possible restrictions on reimbursement from governmental agencies and healthcare organizations, as well as other changes in the healthcare industry.

The Company is dependent on Boehringer Ingelheim to manufacture clinical supplies for its therapeutic antibody programs. An inability to obtain product supply could have a material adverse impact on the Company's business, financial condition and results of operations.

Notes to the Condensed Consolidated Financial Statements (continued)

## 2. Summary of Significant Accounting Policies

### Basis of Preparation and Presentation of Financial Information

The accompanying interim Condensed Consolidated Financial Statements have been prepared in accordance with the accounting principles generally accepted in the United States of America ("GAAP") and with the instructions for Form 10-Q and Regulation S-X. Accordingly, they do not include all of the information and notes required for complete financial statements. These interim Condensed Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and Notes thereto contained in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 7, 2014 (the "2013 Form 10-K"). The Condensed Consolidated Financial Statements of Prothena Corporation plc are presented in U.S. dollars, which is the functional currency of the Company. The unaudited condensed consolidated financial statements include the accounts of the Company and its consolidated subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

### Unaudited Interim Financial Information

The accompanying interim Condensed Consolidated Financial Statements and related disclosures are unaudited, have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for a fair presentation of the results of operations for the periods presented. The year-end condensed balance sheet data was derived from audited financial statements, but does not include all disclosures required by GAAP. The condensed consolidated results of operations for any interim period are not necessarily indicative of the results to be expected for the full year or for any other future year or interim period. Although we achieved net income in the first quarter of 2014, primarily as a result of the \$30.0 million upfront milestone payment under the License Agreement, we expect to incur substantial losses for the foreseeable future.

### Use of Estimates

The preparation of the Condensed Consolidated Financial Statements in conformity with GAAP requires management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Because of the uncertainties inherent in such estimates, actual results may differ materially from these estimates.

### Significant Accounting Policies

There have been no significant changes to the accounting policies during the three months ended March 31, 2014, as compared to the significant accounting policies described in Note 2 of the "Notes to Consolidated Financial Statements" in the Company's Annual Report for the year ended December 31, 2013 on Form 10-K, other than those listed below.

#### Revenue Recognition

Revenue is recognized when earned and non-refundable, when payment is reasonably assured, and when there is no future obligation with respect to the revenue, in accordance with the terms prescribed in the applicable contract.

#### Multiple Element Arrangements

The Company's revenues are generated primarily through its license, development and commercialization agreement. These types of agreements generally contain multiple elements, or deliverables, which may include (i) licenses to the Company's technology, (ii) R&D activities to be performed on behalf of the collaborative partner, and (iii) in certain cases, services or obligations in connection with the manufacturing or supply of pre-clinical and clinical material. Payments to the Company under these arrangements typically include one or more of the following: non-refundable, upfront license fees; funding of research and/or development efforts; milestone payments; and royalties on future product sales.

Revenue under license, development and commercialization agreements is recognized based on the performance requirements of the contract. Determinations of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature



of the fees charged for deliverables and the collectability of those fees.

The Company recognizes revenue related to license, development and commercialization agreements in accordance with the provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 605-25, "Revenue Recognition - Multiple-Element Arrangements." The Company evaluates all deliverables within an arrangement to determine whether or not they provide value on a stand-alone basis. Based on this evaluation, the deliverables are separated into units of

5

---

Notes to the Condensed Consolidated Financial Statements (continued)

accounting. The arrangement consideration that is fixed or determinable at the inception of the arrangement is allocated to the separate units of accounting based on their relative selling prices.

To determine the selling price of a separate deliverable, the Company uses the hierarchy as prescribed in ASC Topic 605-25 based on vendor-specific objective evidence (VSOE), third-party evidence (TPE) or best estimate of selling price (BESP). VSOE is based on the price charged when the element is sold separately and is the price actually charged for that deliverable. TPE is determined based on third party evidence for a similar deliverable when sold separately and BESP is the estimated selling price at which we would transact a sale if the elements of collaboration and license arrangements were sold on a stand-alone basis to the buyer.

Payments or full reimbursements resulting from our R&D efforts for those arrangements where such efforts are considered as deliverables are recognized as the services are performed and are presented on a gross basis so long as there is persuasive evidence of an arrangement, the fee is fixed or determinable, and collection of the related receivable is reasonably assured. However, such funding is recognized as a reduction of R&D expense when the Company engages in a R&D project jointly with another entity, with both entities participating in project activities and sharing costs and potential benefits of the project.

#### Milestone Revenue

The Company accounts for milestones under ASU No. 2010-17, Milestone Method of Revenue Recognition. Under the milestone method, contingent consideration received from the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity's performance or on the occurrence of a specific outcome resulting from the entity's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) that would result in additional payments being due to the entity. At the inception of an agreement that includes milestone payments, the Company evaluates whether each milestone is substantive and at risk to both parties on the basis of the contingent nature of the milestone. This evaluation includes an assessment of whether (a) the consideration is commensurate with either (1) the entity's performance to achieve the milestone, or (2) the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone, (b) the consideration relates solely to past performance, and (c) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. The Company evaluates factors such as the scientific, regulatory, commercial and other risks that must be overcome to achieve a particular milestone, the level of effort and investment required to achieve such milestone and whether the milestone consideration is reasonable relative to all deliverables and payment terms in the arrangement in making this assessment.

The Company generally classifies each of its milestones into one of three categories: (i) clinical milestones, (ii) regulatory and development milestones, and (iii) commercial milestones. Clinical milestones are typically achieved when a product candidate advances into or completes a defined phase of clinical research. For example, a milestone payment may be due to the Company upon the initiation of a clinical trial for a new indication. Regulatory and development milestones are typically achieved upon acceptance of the submission for marketing approval of a product candidate or upon approval to market the product candidate by the FDA or other regulatory authorities. For example, a milestone payment may be due to the Company upon filing of a Biologics License Application (BLA) with the FDA. Commercial milestones are typically achieved when an approved pharmaceutical product reaches certain defined levels of net royalty sales by the licensee of a specified amount within a specified period.

Commercial milestone payments and milestone payments that are not deemed to be substantive will be accounted for as a contingent revenue payment with revenue recognized when all contingencies are lifted, which is expected to be upon achievement of the milestone, assuming all revenue recognition criteria are met.

#### Profit Share Revenue

For agreements, with profit sharing arrangements, the Company will record its share of the pre-tax commercial profit as collaboration revenue when the profit sharing can be reasonably estimated and collectability is reasonably assured.

Royalty Revenue

The Company will recognize revenue from royalties based on licensees' sales of the Company's products or products using the Company's technologies. Royalties are recognized as earned in accordance with the contract terms when royalties from licensees can be reasonably estimated and collectability is reasonably assured.

Net Income per Ordinary Share

6

---

Notes to the Condensed Consolidated Financial Statements (continued)

Basic net income per ordinary share is computed by dividing net income attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period less the weighted average number of unvested restricted ordinary shares subject to the right of repurchase. Diluted net income per ordinary share is computed by giving effect to all dilutive potential ordinary shares including options.

Comprehensive Income (Loss)

Comprehensive income (loss) is comprised of net income (loss) and other comprehensive income (loss). The Company has no components of other comprehensive income (loss). Therefore net income (loss) equals comprehensive income (loss) for all periods presented and, accordingly, the Condensed Consolidated Statements of Comprehensive Income (Loss) is not presented in a separate statement.

Segment and Concentration of Risks

The Company operates in one segment. The Company's chief operating decision maker (the "CODM"), its Chief Executive Officer, manages the Company's operations on a consolidated basis for purposes of allocating resources. When evaluating the Company's financial performance, the CODM reviews all financial information on a consolidated basis.

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash and cash equivalents and accounts receivable. The Company places its cash equivalents with high credit quality financial institutions and by policy, limits the amount of credit exposure with any one financial institution. Deposits held with banks may exceed the amount of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents and its credit risk exposure is up to the extent recorded on the Company's consolidated balance sheet.

The Company's accounts receivable are derived from Elan located in Ireland for all periods presented. For the quarter ended March 31, 2014 it also included amounts due from Roche entities located in the U.S. and Switzerland under the License Agreement that became effective January 22, 2014. All of the Company's long-lived assets were held in the United States. Revenue recorded in the Statements of Operations consists of collaboration revenue related to the upfront payment from Roche under the License Agreement and reimbursement for research and development services and fees earned from the provision of nonclinical research support to Elan, primarily in the areas of safety, toxicology and regulatory. The fees charged to Elan were calculated based on the expenses incurred by the Company in the provision of those R&D services, plus a contractually determined mark-up of those expenses.

The Company utilizes Boehringer Ingelheim in Switzerland for its clinical drug product supply for therapeutic antibody programs. An inability to obtain drug product supply could have a material adverse impact on the Company's business, financial condition and results of operations.

Emerging Growth Company Status

As an Emerging Growth Company under the Jumpstart Our Business Startups Act ("JOBS Act"), the Company is eligible to take advantage of certain exemptions from various reporting requirements that apply to other public companies that are not Emerging Growth Companies. The Company has an extended transition period for adopting new or revised accounting standards that have different effective dates for public and private companies until such time as those standards apply to private companies.

Recent Accounting Pronouncements

In July 2013, the FASB issued ASU 2013-11, Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit when a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists, on the financial statement presentation of unrecognized tax benefits. The new guidance provides that a liability related to an unrecognized tax benefit be presented as a reduction of a deferred tax asset for a net operating loss carryforward, a similar tax loss or a tax credit carryforward if such settlement is required or expected in the event the uncertain tax position is disallowed. The new guidance becomes effective for the Company on January 1, 2015 and can be applied prospectively to unrecognized tax benefits that exist at the effective date with retrospective applications permitted. The Company has presented its unrecognized tax benefits as a reduction in its deferred tax assets in its Condensed

Consolidated balance sheet as of December 31, 2013 and March 31, 2014.

3. Fair Value Measurements

The Company measures certain financial assets and liabilities at fair value on a recurring basis, including cash equivalents. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on

7

---

## Notes to the Condensed Consolidated Financial Statements (continued)

assumptions that market participants would use in pricing an asset or a liability. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value:

Level 1 — Observable inputs such as quoted prices (unadjusted) for identical assets or liabilities in active markets.

Include other inputs that are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for

Level 2 which all significant inputs are observable in the market or can be derived from observable market data.

Where applicable, these models project future cash flows and discount the future amounts to a present value using market-based observable inputs including interest rate curves, foreign exchange rates, and credit ratings.

Level 3 Unobservable inputs that are supported by little or no market activities, which would require the Company to develop its own assumptions.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The carrying amounts of certain financial instruments, such as cash equivalents, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities, and low market interest rates, if applicable.

Based on the fair value hierarchy, the Company classifies its cash equivalents within Level 1. This is because the Company values its cash equivalents using quoted market prices. The Company's Level 1 securities consist of \$173.9 million and \$153.3 million in money market funds included in cash and cash equivalents at March 31, 2014 and December 31, 2013, respectively.

#### 4. Composition of Certain Balance Sheet Items

Property and Equipment, net

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

	March 31, 2014	December 31, 2013
Machinery and equipment	\$5,660	\$5,649
Leasehold improvements	1,927	1,927
Purchased computer software	110	85
	7,697	7,661
Less: accumulated depreciation and amortization	(4,464)	(4,289)
Property and equipment, net	\$3,233	\$3,372

Depreciation and amortization expense was \$0.2 million and \$0.1 million for the three months ended March 31, 2014 and 2013, respectively.

#### Other Current Liabilities

Other current liabilities consisted of the following (in thousands):

	March 31, 2014	December 31, 2013
Payroll and related expenses	\$1,266	\$2,800
Professional services	688	616
Accrued offering costs	43	82
Deferred rent	138	138
Other	342	254
Other current liabilities	\$2,477	\$3,890

#### 5. Net income (loss) Per Share

Basic net income (loss) per share is calculated by dividing net income (loss) by the weighted-average number of ordinary shares outstanding during the period. Shares used in diluted net income (loss) per share would include the dilutive effect of ordinary

8

---

## Notes to the Condensed Consolidated Financial Statements (continued)

shares potentially issuable upon the exercise of stock options outstanding and restricted stock units. However, potentially issuable ordinary shares are not used in computing diluted net loss per share as their effect would be anti-dilutive due to the loss recorded during the three months ended March 31, 2013, and therefore diluted net loss per share is equal to basic net loss per share. During the three months ended March 31, 2014, diluted net income per ordinary share is computed by giving effect to all dilutive potential ordinary shares including options.

Net income (loss) per share was determined as follows (in thousands, except per share amounts):

	Three Months Ended March 31,	
	2014	2013
Numerator (basic and dilutive):		
Net income (loss)	\$17,852	\$(8,951)
Denominator (basic):		
Weighted-average ordinary shares outstanding	21,884	17,679
Denominator (diluted):		
Weighted-average ordinary shares outstanding	21,884	17,679
Dilutive stock options outstanding	1,058	—
Net weighted average ordinary shares outstanding	22,942	17,679
Net income (loss) per share attributable to holders of ordinary shares:		
Basic net income (loss) per share	\$0.82	\$(0.51)
Diluted net income (loss) per share	\$0.78	\$(0.51)
The equivalent ordinary shares not included in diluted net income (loss) per share because their effect would be anti-dilutive are as follows (in thousands):		

	Three Months Ended March 31,	
	2014	2013
Period end stock options to purchase ordinary shares	390	914
Restricted stock units	—	—
Total	390	914

## 6. Commitments and Contingencies

## Operating Lease

The Company has a noncancelable operating lease agreement for office and research and development space in the U.S. that expires in November 2020 with an estimated annual rent payment of approximately \$1.9 million. The lease provides for approximately 50,400 of rentable square feet at a base rent that increases annually.

Future minimum payments under operating leases as of March 31, 2014, are as follows (in thousands):

Year Ended December 31,	Operating Lease
2014 (Remaining 9 months)	\$980
2015	1,756
2016	1,930
2017	2,009
2018	2,089
Thereafter	4,230
Total future minimum lease payments	\$12,994





## Notes to the Condensed Consolidated Financial Statements (continued)

The Company recognizes rent expense on a straight-line basis over the noncancelable lease term and records the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. Where leases contain escalation clauses, rent abatements, and/or concessions, such as rent holidays and landlord or tenant incentives or allowances, the Company applies them in the determination of straight-line rent expense over the lease term. The Company records the tenant improvement allowance as deferred rent and associated expenditures as leasehold improvements that are being amortized over the shorter of their estimated useful life or the term of the lease. Rent expense was \$0.4 million and \$0.3 million for the three months ended March 31, 2014 and 2013, respectively.

**Indemnity Obligations**

The Company has entered into indemnification agreements with its current, and former, directors and officers and certain key employees. These agreements contain provisions that may require the Company, among other things, to indemnify such persons against certain liabilities that may arise because of their status or service and advance their expenses incurred as a result of any indemnifiable proceedings brought against them. The obligations of the Company pursuant to the indemnification agreements continue during such time as the indemnified person serves the Company and continues thereafter until such time as a claim can be brought. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future amounts paid. As a result of its insurance policy coverage, the Company believes the estimated fair value of these indemnification agreements is minimal. Accordingly, the Company had no liabilities recorded for these agreements as of March 31, 2014 and 2013.

**Commitments**

As of March 31, 2014, the Company had non-cancelable purchase commitments to suppliers for \$4.7 million of which \$3.2 million is included in accrued current liabilities, and contractual obligations under license agreements of \$1.0 million. The following is a summary of the Company's non-cancelable purchase commitments and contractual obligations as of March 31, 2014 (in thousands):

	Total	2014 (Remaining 9 months)	2015	2016	2017	2018	Thereafter
Purchase Obligations	\$4,741	\$ 4,741	\$—	\$—	\$—	\$—	\$—
Contractual obligations under license agreements <sup>(1)</sup>	1,049	64	85	85	85	85	645
Total	\$5,790	\$ 4,805	\$ 85	\$ 85	\$ 85	\$ 85	\$ 645

<sup>(1)</sup> Excludes future obligations pursuant to the cost-sharing arrangement under the Company's License Agreement with Roche. Amounts of such obligations, if any, cannot be determined at this time.

**7. Roche License Agreement****Overview**

In December 2013, the Company entered into a License, Development, and Commercialization Agreement, or the License Agreement, with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc., or collectively, Roche, to develop and commercialize certain antibodies that target alpha-synuclein, including PRX002, which are referred to collectively as "Licensed Products." On January 22, 2014 the License Agreement with Roche became effective following the expiration of the Hart-Scott-Rodino (HSR) waiting period. Upon the effectiveness of the License Agreement, the Company granted to Roche an exclusive, worldwide license to develop, make, have made, use, sell, offer to sell, import, and export the Licensed Products. The Company will retain certain rights to conduct development of the Licensed Products and an option to co-promote PRX002 in the U.S. During the term of the License Agreement, the Company and Roche will work exclusively with each other to research and develop antibody products targeting

alpha-synuclein potentially including incorporation of Roche's proprietary Brain Shuttle™ technology to potentially increase delivery of therapeutic antibodies to the brain. The License Agreement provides that Roche would make an upfront payment to the Company of \$30.0 million, which was received in February 2014, and the clinical milestone payment of \$15.0 million triggered by the initiation of the Phase 1 study for PRX002 in the clinic, which occurred in April 2014.

For PRX002, Roche is also obligated to pay:

- up to \$380.0 million upon the achievement of development, regulatory and various first commercial sales milestones;

Notes to the Condensed Consolidated Financial Statements (continued)

- up to an additional \$175.0 million in ex-U.S. commercial sales milestones; and
- tiered, high single-digit to high double-digit royalties in the teens on ex-U.S. annual net sales, subject to certain adjustments.

Roche bears 100% of the cost of conducting the research activities under the License Agreement. In the United States, the parties will share all development and commercialization costs, as well as profits, all of which will be allocated 70% to Roche and 30% to the Company, for PRX002 in the Parkinson's disease indication, as well as any other Licensed Products and/or indications for which the Company opts in to participate in co-development and co-funding. After the completion of specific clinical trial activities, the Company may opt out of the co-development and cost and profit sharing on any co-developed Licensed Products and instead receive U.S. commercial sales milestones totaling up to \$155.0 million and tiered, single-digit to high double-digit royalties in the teens based on U.S. annual net sales, subject to certain adjustments, with respect to the applicable Licensed Product.

The Company filed an investigational new drug application with the U.S. Food and Drug Administration for PRX002 and subsequently initiated a Phase 1 study in 2014. Following the Phase 1 study, Roche will be primarily responsible for developing, obtaining and maintaining regulatory approval for, and commercializing Licensed Products. Roche will also become responsible for the clinical and commercial manufacture and supply of Licensed Products within a defined time period following the effective date of the License Agreement.

In addition, the Company has an option under the License Agreement to co-promote PRX002 in the U.S. in the Parkinson's disease indication. If the Company exercises such option, it may also elect to co-promote additional Licensed Products in the U.S. approved for Parkinson's disease. Outside the U.S., Roche will have responsibility for developing and commercializing the Licensed Products. Roche bears all costs for product clinical development in support of regulatory approval for all territories outside the U.S. and will pay the Company a variable royalty based on annual net sales of the Licensed Products outside the U.S.

While Roche will record product revenue from sales of the Licensed Products, the Company and Roche will share in the net profits and losses of sales of the PRX002 for the Parkinson's disease indication in the U.S. on a 70/30% basis with the Company receiving 30% of the profit and losses provided that the Company has not exercised its opt-out right.

The License Agreement continues on a country-by-country basis until the expiration of all payment obligations under the License Agreement. The License Agreement may also be terminated (i) by Roche at will after the first anniversary of the effective date of the License Agreement, either in its entirety or on a Licensed Product-by-Licensed Product basis, upon 90 days' prior written notice to the Company prior to first commercial sale and 180 days' prior written notice to Prothena after first commercial sale, (ii) by either party, either in its entirety or on a Licensed Product-by-Licensed Product or region-by-region basis, upon written notice in connection with a material breach uncured 90 days after initial written notice, and (iii) by either party, in its entirety, upon insolvency of the other party. The License Agreement may be terminated by either party on a patent-by-patent and country-by-country basis if the other party challenges a given patent in a given country. The Company's rights to co-develop Licensed Products under the License Agreement will terminate if the Company commences certain studies for certain types of competitive products. The Company's rights to co-promote Licensed Products under the License Agreement will terminate if the Company commences a Phase 3 study for such competitive products.

The License Agreement cannot be assigned by either party without the prior written consent of the other party, except to an affiliate of such party or in the event of a merger or acquisition of such party, subject to certain conditions. The License Agreement also includes customary provisions regarding, among other things, confidentiality, intellectual property ownership, patent prosecution, enforcement and defense, representations and warranties, indemnification, insurance, and arbitration and dispute resolution.

Collaboration accounting

The License Agreement was evaluated under ASC 808, Collaborative Agreements. At the outset of the contract, the Company concluded that this agreement does not qualify as a collaboration under ASC 808 because Prothena is not an active participant as a result of the opt-out provision. The Company believes that Roche is the principal in the sales transactions with third parties as it is the primary obligor, bearing inventory and credit risk. The Company will record its share of pre-tax commercial profit generated from the collaboration with Roche, as collaboration revenue when the profit share can be reasonably estimated and collectability is reasonably assured. Prior to commercialization of a Licensed Product, the Company's portion of the expenses related to the License Agreement reflected on its income statement will be limited to R&D expenses. After commercialization, if the Company opts-in to co-detail commercialization expenses related to commercial capabilities, including the establishment of a field sales force and other activities to support the Company's commercialization efforts, will be recorded as SG&A expense and will be

Notes to the Condensed Consolidated Financial Statements (continued)

factored into the computation of the profit and loss share. The Company will record the portion of the net receivable related to commercialization activities as collaboration revenue.

Multiple Element Consideration

The License Agreement was evaluated under ASC 605-25, Multiple Element Arrangements. The License Agreement includes the following deliverables: (1) an exclusive royalty bearing license, with the right to sublicense to develop and commercialize certain antibodies that target alpha-synuclein, including PRX002 delivered at the effective date; (2) the Company's obligation to supply clinical material as requested by Roche for a period up to twelve months; (3) the Company's obligation to provide manufacturing related services to Roche for a period up to twelve months; (4) the Company's obligation to provide development activities under the development plan including the preparation and filing of the IND and initiation of the Phase I clinical trial estimated to be carried out over the next two years and (5) the Company's obligation to provide indeterminate research services for up to three years at rates that are not significantly discounted and fully reimbursable by Roche.

All of the deliverables were deemed to have stand-alone value and to meet the criteria to be accounted for as separate units of accounting under ASC Topic 605-25. Factors considered in the determination included, among other things, for the license, the research and development capabilities of Roche and Roche's sublicense rights, and for the remaining deliverables the fact that they are not proprietary and can be and have been provided by other vendors. The amount of allocable arrangement consideration is limited to amounts that are fixed or determinable excluding refund rights, concessions or performance bonuses. As such, the Company will exclude from such allocable consideration the milestone payments and royalties regardless of the probability of receipt because such payments are not considered fixed or determinable. Such milestone payments and royalties will be evaluated separately as the related contingencies are resolved. Consideration for research services were not allocated as the amount is not fixed and determinable and is not at a significant incremental discount. There are no refund rights, concessions or performance bonuses to consider.

The Company allocated the fixed and determinable consideration to the license and other deliverables using the relative selling price method based on the best estimate of selling price for the license and third party evidence for the remaining deliverables. The best estimate of selling price for the license was based on a discounted cash flow model. The key assumptions used in the discounted cash flow model used to determine the best estimate of selling price for the license granted to Roche under the License Agreement included the market opportunity for commercialization of PRX002 in the U.S. and the Royalty Territory (for jointly funded products the Royalty Territory is worldwide except for the U.S. for all Licensed Products that are not jointly funded the Royalty Territory is worldwide), the probability of successfully developing and commercializing PRX002, the remaining development costs for PRX002, and the estimated time to commercialization of PRX002.

The Company's discounted cash flow model included several market conditions and entity-specific inputs, including the likelihood that clinical trials will be successful, the likelihood that regulatory approval will be obtained and the product commercialized, the appropriate discount rate, the market locations, size and potential market share of the product, the expected life of the product, and the competitive environment for the product. The market assumptions were generated using a patient-based forecasting approach, with key epidemiological, market penetration, dosing, compliance, length of treatment, and pricing assumptions derived from primary and secondary market research, referenced from third-party sources.

The Company concluded that a change in the assumptions used to determine the BESP of the license deliverable would not have a significant effect on the allocation of arrangement consideration. Based on the relative selling price method, the amount that the Company recognized on the effective date of the agreement concurrent with the delivery of the license and know-how was limited to the lesser of the amount otherwise allocable using the relative selling price method, which based on the discounted cash flow model was determined to be \$34.7 million, or the non-contingent amount which was the \$30.0 million upfront fee. As the remaining deliverables are delivered, any consideration received will be allocated to license revenue and the other deliverables based on their relative

percentages until such time as the full allocated consideration of \$34.7 million has been recognized as license revenue, and the balance of the monetary consideration will be recorded as an offset against R&D expenses. The Company recognized the \$30.0 million upfront payment as collaboration license revenue in the three months ended March 31, 2014.

The Company will recognize the research reimbursement as collaboration revenue as earned. The Company recognized \$0.3 million as collaboration service revenue in the three months ended March 31, 2014 for research reimbursement from Roche. Cost sharing payments to Roche will be recorded as R&D expenses. The Company recognized \$0.2 million in R&D expense for payments made to Roche during the three months ended March 31, 2014. Reimbursement for development costs from Roche under the cost-sharing arrangement will be allocated between license revenue and an offset to R&D expenses based on the relative selling price method until the full allocated consideration of \$34.7 million has been recognized as license revenue, after which the full

Notes to the Condensed Consolidated Financial Statements (continued)

reimbursement would be recorded as an offset to R&D expenses. Reimbursement for development costs from Roche during the three months ended March 31, 2014 were \$2.0 million, of which \$1.8 million was recognized as collaboration license revenue and \$0.2 million was recognized as an offset to R&D expenses.

Milestone accounting

The Company concluded that the \$15.0 million clinical milestone triggered upon the initiation of the Phase 1 study from PRX002 in the clinic, which occurred in April 2014 is consistent with the definition of a substantive milestone included in ASU No. 2010-17, Milestone Method of Revenue Recognition. Accordingly, the Company will recognize payments related to the achievement of this milestone when the milestone is achieved. The milestone payment will be allocated to the units of accounting based on the relative selling price method for income statement classification purposes. Factors considered in this determination included scientific and regulatory risk that must be overcome to achieve each milestone, the level of effort and investment required to achieve the milestone, and the monetary value attributed to the milestone.

The clinical and regulatory milestones under the License Agreement after the point at which the Company could opt-out are not considered to be substantive due to the fact that active participation in the development activities that generate the milestones is not required by the License Agreement, and the Company can opt-out of these activities. There are no refund or claw-back provisions and the milestones are uncertain of occurrence even after the Company has opted out. Based on this determination, these milestones will be recognized similar to the commercial milestone, which will be accounted for as contingent revenue payments with revenue recognized upon achievement of the milestone assuming all revenue recognition criteria are met.

The Company did not recognize any milestone payments under the License Agreement during the three months ended March 31, 2014.

8. Shareholders' Equity

Ordinary Shares

As of March 31, 2014, the Company had 100,000,000 ordinary shares authorized for issuance with a par value of \$0.01 per share and 21,904,780 ordinary shares issued and outstanding. Each ordinary share is entitled to one vote and, on a pro rata basis, to dividends when declared and the remaining assets of the Company in the event of a winding up.

Euro Deferred Shares

As of March 31, 2014, the Company had 10,000 Euro Deferred Shares authorized for issuance with a nominal value of €22 per share. No Euro Deferred Shares are outstanding at March 31, 2014. The rights and restrictions attaching to the Euro Deferred Shares rank pari passu with the ordinary shares and are treated as a single class in all respects.

February 2014 Offering

In February 2014 Elan Science One Limited, or ESOL, an indirect wholly owned subsidiary of Perrigo Company plc, or Perrigo, sold 3,182,253 ordinary shares of Prothena at a price to the public of \$26.00 per ordinary share, before the underwriting discount. As a result, ESOL and Perrigo no longer own any ordinary shares of Prothena.

The Company did not receive any of the proceeds from the offering, and the total number of the Company's ordinary shares outstanding did not change as a result of this offering. The Company paid the costs associated with the sale of these ordinary shares (other than the underwriting discount, fees and disbursements of counsel for the selling shareholder) pursuant to a Subscription and Registration Rights Agreement dated November 8, 2012 by and between the Company, Elan and ESOL.

9. Share-Based Compensation

The Prothena Corporation plc 2012 Long Term Incentive Plan

The Company's 2012 Long Term Incentive Plan ("LTIP") provides for the issuance of ordinary share-based awards, including restricted shares, restricted stock units ("RSUs"), stock options, share appreciation rights and other equity-based awards, to its employees, officers, directors and consultants. Options under the LTIP may be granted for periods up to ten years. All options issued to date have had a ten year life. Under the LTIP, the Company is authorized



to issue a total of 2,650,000 ordinary shares. During the three months ended March 31, 2014 and 2013, the Company granted 509,000 and 1,366,000 share options, respectively, under its LTIP. The Company's options awards generally vest over four years. As of March 31, 2014, 167,500 ordinary shares

## Notes to the Condensed Consolidated Financial Statements (continued)

remain available for grant and options to purchase 2,433,981 ordinary shares granted from the LTIP were outstanding with a weighted-average exercise price of approximately \$12.19 per share. In March 2014, our Board approved an increase of 2.9 million additional ordinary shares authorized for issuance under our 2012 Long Term Incentive Plan, subject to shareholder approval.

## Prothena Share-based Compensation Expense

The Company estimates the fair value of share-based compensation on the date of grant using an option-pricing model. The Company uses the Black-Scholes model to value share-based compensation, excluding RSUs, which the Company values using the fair market value of its ordinary shares on the date of grant. The Black-Scholes option-pricing model determines the fair value of share-based payment awards based on the share price on the date of grant and is affected by assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the Company's share price, volatility over the expected life of the awards and actual and projected employee stock option exercise behaviors. Since the Company has no historic employee share option exercise data, the simplified method has been used to estimate the expected life of all options. Although the fair value of share options granted by the Company is estimated by the Black-Scholes model, the estimated fair value may not be indicative of the fair value observed in a willing buyer and seller market transaction.

As share-based compensation expense recognized in the Condensed Consolidated Financial Statements is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from estimates. Forfeitures were estimated based on estimated future turnover and historical experience.

Share-based compensation expense will continue to have an adverse impact on the Company's results of operations, although it will have no impact on its overall financial position. The amount of unearned share-based compensation currently estimated to be expensed from now through the year 2017 related to unvested share-based payment awards at March 31, 2014 is \$16.9 million. The weighted-average period over which the unearned share-based compensation is expected to be recognized is 3.1 years. If there are any modifications or cancellations of the underlying unvested securities, the Company may be required to accelerate, increase or cancel any remaining unearned share-based compensation expense. Future share-based compensation expense and unearned share-based compensation will increase to the extent that the Company grants additional equity awards.

Share-based compensation expense recorded in these Condensed Consolidated Financial Statements for the three months ended March 31, 2014 and 2013 was based on awards from the LTIP granted to Prothena employees. The following table summarizes share-based compensation expense for the periods presented (in thousands):

	Three Months Ended March 31,	
	2014	2013
Research and development <sup>(1)</sup>	\$483	\$79
General and administrative	860	261
Total	\$1,343	\$340

<sup>(1)</sup> Includes \$46,000 and zero of share-based compensation expense for the three months ended March 31, 2014 and 2013, respectively, related to an option granted to a consultant.

The fair value of the options granted to employees during the three months ended March 31, 2014 and 2013 is estimated as of the grant date using the Black-Scholes option-pricing model assuming the weighted-average assumptions listed in the following table:

## Notes to the Condensed Consolidated Financial Statements (continued)

	Three Months Ended	
	March 31,	
	2014	2013
Expected volatility	83.9%	84.0%
Risk-free interest rate	1.8%	1.0%
Expected dividend yield	—%	—%
Expected life (in years)	6.0	6.0
Weighted average grant date fair value	\$21.20	\$4.32

The following table summarizes the Company's share option activity during the three months ended March 31, 2014:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2013	1,973,500	\$7.50	9.17	\$37,528
Granted	509,000	29.80		
Canceled	—	—		
Outstanding at March 31, 2014	2,433,981	\$12.19	9.12	\$63,581
Vested and expected to vest at March 31, 2014	2,322,548	\$12.02	9.11	\$61,065
Vested at March 31, 2014	640,161	\$6.40	8.87	\$20,426

The following table summarizes information about the Company's share options outstanding as of March 31, 2014:

Range of Exercise Prices	Options Outstanding			Options Exercisable		
	Number of Options	Weighted - Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	
\$6.03	\$6.03	453,375	8.83	\$6.03	131,437	\$6.03
6.41	6.41	809,606	8.83	6.41	354,058	6.41
6.65	6.65	50,000	8.96	6.65	50,000	6.65
6.73	6.73	366,000	9.00	6.73	104,666	6.73
8.21	17.63	162,500	9.22	12.15	—	—
20.04	20.04	13,500	9.50	20.04	—	—
20.17	20.17	40,000	9.43	20.17	—	—
24.26	24.26	30,000	9.59	24.26	—	—
29.52	29.52	25,000	9.84	29.52	—	—
29.81	29.81	484,000	9.85	29.81	—	—
\$6.03	\$29.81	2,433,981	9.12	\$12.19	640,161	\$6.40

Notes to the Condensed Consolidated Financial Statements (continued)

#### 10. Income Taxes

The major taxing jurisdictions for the Company are Ireland and the U.S.. The Company's income tax provision was \$151,000 and \$6,000 for the three months ended March 31, 2014 and 2013, respectively. The provision for income taxes differs from the statutory tax rate of 12.5% applicable to Ireland primarily due to Irish net operating losses for which a tax provision benefit is not recognized and due to U.S. income taxed at different rates. Our income tax provision reflects our estimate of the effective tax rate expected to be applicable for the full year and we re-evaluate this estimate each quarter based on our forecasted tax expense for the full year. Jurisdictions with a projected loss for the year where no tax benefit can be recognized are excluded from the estimated annual effective tax rate.

The Company's deferred tax assets are composed primarily of its Irish subsidiaries' net operating loss carryovers, state net operating loss carryforwards available to reduce future taxable income of the Company's U.S. subsidiary, federal and state tax credit carryforwards and other temporary differences. We maintain a valuation allowance against certain U.S. federal and state and Irish deferred tax assets. Each reporting period, we evaluate the need for a valuation allowance on our deferred tax assets by jurisdiction.

No provision for income tax in Ireland has been recognized on undistributed earnings of our foreign subsidiaries because we consider such earnings to be indefinitely reinvested.

#### 11. Related Parties

Prior to December 21, 2012, the Prothena Business operated as part of Elan and not as a separate stand-alone entity. Effective December 20, 2012, the Prothena Business separated from Elan. In connection with the separation, a wholly owned subsidiary of Elan acquired an 18% interest in the Company (as calculated immediately following the separation). Elan was subsequently acquired by Perrigo Company plc, or Perrigo, in December 2013 and such 3,182,253 ordinary shares were held by Elan Science One Limited, or ESOL, an indirect wholly owned subsidiary of Perrigo as of December 31, 2013.

##### February 2014 Offering

In February 2014, ESOL sold 3,182,253 ordinary shares of Prothena at a price to the public of \$26.00 per ordinary share, before the underwriting discount. As a result, ESOL and Perrigo no longer owned any ordinary shares of Prothena as of such sale.

The Company did not receive any of the proceeds from the offering, and the total number of the Company's ordinary shares outstanding did not change as a result of this offering. The Company paid the expenses associated with the sale of these ordinary shares (other than the underwriting discount, fees and disbursements of counsel for the selling shareholder) pursuant to a Subscription and Registration Rights Agreement dated November 8, 2012 by and between the Company, Elan and ESOL.

As described elsewhere in these Condensed Consolidated Financial Statements, the results of operations of the Prothena business for the time period prior to the separation include transactions with Elan. The related party revenue recognized by the Company for the three months ended March 31, 2014 and 2013 consisted of fees arising from R&D services provided to Elan. Additionally, the results of operations for the time period prior to the separation include certain costs allocated from Elan to the Company for centralized support services.

The Company has entered into certain agreements with Elan, including the Transitional Services Agreement and the R&D Services Agreement.

##### Transitional Services Agreement

In December 2012, as amended in March 2013, the Company entered into a Transitional Services Agreement ("TSA") with Elan under which Elan would provide to the Company, and the Company would provide to Elan, specified services to help ensure an orderly transition following the separation and distribution. The services provided by Elan under the Transitional Services Agreement included chemistry, manufacturing and controls/quality assurance, information technology services, facilities services, company secretarial services, finance services, legal services, compliance services and human resources services.

The payment terms of the agreement generally provided that the Company would pay Elan for the time spent by each Elan employee providing the services, which will be calculated by the portion of the employee's time dedicated to the provision of the services, plus 40%. Similarly, Elan would pay the Company for the time spent by each of the Company's employee providing services to Elan, which would be an agreed percentage of the employee's time, based on the cost of providing those services plus

Notes to the Condensed Consolidated Financial Statements (continued)

40% and including, as applicable, any fees for any services from Elan or the Company provided by third party providers and invoiced to the recipient at cost.

The TSA expired on December 31, 2013.

R&D Services Agreement

In December 2012, as amended in March 2013, the Company entered into a Research and Development Services Agreement (“RDSA”) with Elan pursuant to which the Company will provide certain R&D services to Elan. The RDSA has a term of two years. Either party is entitled to terminate the RDSA at any time by notice in writing to the other party if there has been an uncured material breach by the other party or if the other party becomes insolvent or if the other party is in breach of any of its confidentiality obligations under the agreement.

The services provided for under the RDSA include support for the ELND005 program (which include the provision of expert advice and opinion in the areas of nonclinical safety/toxicology and pharmacology, regulatory support for nonclinical sections of pertinent documents, conducting and interpreting externally conducted nonclinical studies, and support in respect of the identification and maintenance of nonclinical expert advisors as required). These services are substantially similar to research services performed by the Company for Elan prior to the separation and distribution. The payment terms of the RDSA provide that Elan will pay the Company: (i) a fixed charge of \$500,000 per year based on a charge for two of the Company’s employees providing the services at a rate of \$250,000 each per annum, (ii) if the \$500,000 fixed charge has been paid in any year, a variable charge of \$250,000 per year for any additional employee that provides services for such year (calculated pro rata based on the number of days the employee provides services in such year), (iii) research costs including direct overheads and (iv) a mark-up of 10% applied to the fixed charge, variable charge (if any) and research costs such that the total payment reflects a cost-plus standard. There is also a fixed monthly charge of \$7,500 to account for lab space and capital equipment used by Elan, for so long as Elan uses such lab space and capital equipment. Revenue recognized by the Company for the three months ended March 31, 2014 and 2013 included fees arising from R&D services provided to Elan of \$138,000 and \$171,000, respectively.

12. Subsequent Events

In April 2014, the Company together with Roche initiated a Phase 1 clinical trial of PRX002. The study is a randomized, double-blind, placebo-controlled, single ascending dose study in healthy subjects. It is designed to assess PRX002 for safety, tolerability, pharmacokinetics and immunogenicity. As a result of this initiation, the Company earned a \$15.0 million milestone payment from Roche under the License Agreement.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Quarterly Report on Form 10-Q, including this Management's Discussion and Analysis of Financial Condition and Results of Operations, contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or our future financial performance. Forward-looking statements may include words such as "may," "will," "should," "expect," "plan," "intend," "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "due," "estimate," "expect," "goal," "intend," "intend," "plan," "predict," "potential," "positioned," "seek," "should," "target," "will," "would," and other similar expressions that are intended to indicate future events and future trends, or the negative of these terms or other comparable terminology.

Forward-looking statements are subject to risks and uncertainties, and actual events or results may differ materially. Factors that could cause our actual results to differ materially include, but are not limited to, those discussed under "Risk Factors" in this report. We also face risks and uncertainties relating to our business including:

- our ability to obtain additional financing in future offerings;
- our operating losses;
- our collaboration with Roche pursuant to the License Agreement to develop and commercialize PRX002, as well as any future licensed products targeting alpha-synuclein;
- our ability to successfully complete research and development of our drug candidates and the growth of the markets for those drug candidates;
- our ability to develop and commercialize products before competitors that are superior to the alternatives developed by such competitors;
- expected activities and responsibilities of us and Roche under the License Agreement;
- our potential receipt of revenue under the License Agreement, including milestone and royalty revenue;
- the satisfaction of conditions under the License Agreement required for continued commercialization, and the payment of potential milestone payments, royalties and fulfillment of other Roche obligations under the License Agreement;
- expectations with respect to our intent and ability to carry out plans to promote PRX002 for the treatment of Parkinson's disease in the U.S. through our co-promotion option under the License Agreement;
- our ability to protect our patents and other intellectual property;
- loss of key employees;
- tax treatment of our separation from Elan, now owned by Perrigo, and subsequent distribution of our ordinary shares;
- restrictions on our taking certain actions due to tax rules and covenants with Elan;
- our ability to maintain financial flexibility and sufficient cash, cash equivalents, and investments and other assets capable of being monetized to meet our liquidity requirements;
- disruptions in the U.S. and global capital and credit markets;
- fluctuations in foreign currency exchange rates;
- extensive government regulation;
- the volatility of our share price;
- business disruptions caused by information technology failures; and
- the other risks and uncertainties described in Part II, Item 1, "Risk Factors" of this quarterly report and the risk factors in our Annual Report on Form 10-K.

We undertake no obligation to revise or update any forward-looking statements to reflect any event or circumstance that arises after the date of this report, or to conform such statements to actual results or changes in our expectations. Except with respect to our trademarks, the trademarks, trade names and service marks appearing in this report are the property of their respective owners.

This discussion should be read in conjunction with the Condensed Consolidated Financial Statements and Notes presented in this Quarterly Report on Form 10-Q and the Consolidated Financial Statements and Notes contained in our 2013 Form 10-K.

#### Overview

We are a clinical stage biotechnology company focused on the discovery, development and commercialization of novel antibodies for the potential treatment of diseases that involve protein misfolding or cell adhesion. We focus on therapeutic monoclonal antibodies directed specifically to disease causing proteins. Our antibody-based product candidates target a number of potential indications including AL and AA forms of amyloidosis (NEOD001), Parkinson's disease and other related synucleinopathies (PRX002) and novel cell adhesion targets involved in inflammatory diseases and cancers (PRX003). Our strategy is to identify antibody candidates for clinical development and commercialization by applying our extensive expertise in generating novel therapeutic antibodies and working with collaborators having expertise in specific animal models of disease.

We are a public limited company formed under the laws of Ireland. We separated from Elan Corporation Limited (formerly Elan Corporation, plc), or Elan, which subsequently became a wholly owned subsidiary of Perrigo Company plc, or Perrigo, on December 20, 2012. Our ordinary shares began trading on The NASDAQ Global Market under the symbol "PRTA" on December 21, 2012 and currently trade on The NASDAQ Global Select Market.

Our business consists of a substantial portion of Elan's former drug discovery business platform, including Neotope Biosciences Limited and its wholly owned subsidiaries Onclave Therapeutics Limited and Prothena Biosciences Inc (which for the period prior to Separation and Distribution we refer to herein as the "Prothena Business"). Prior to December 21, 2012, the Prothena Business operated as part of Elan and not as a separate stand-alone entity. Our Financial Statements for the periods prior to December 21, 2012 have been derived from Elan's historical accounting records and reflect significant allocations of direct costs and expenses. All of the allocations and estimates in these Financial Statements are based on assumptions that we believe are reasonable. However, the Financial Statements do not necessarily represent our financial position or results of operations had we been operating as a separate independent entity. See Note 2 of the "Notes to the Consolidated Financial Statements" included in Item 8 of the 2013 Form 10-K.

#### Recent Developments

##### NEOD001

On April 23, 2014, we announced interim findings from the ongoing Phase 1 clinical trial of NEOD001. On April 29, 2014, we presented interim data demonstrating cardiac biomarker responses from the ongoing Phase 1 study in patients with AL amyloidosis and persistent organ dysfunction at the XIV International Symposium on Amyloidosis, conference in Indianapolis, Indiana. The interim findings support the planned advancement of the NEOD001 clinical program into a Phase 2/3 study later this year.

##### PRX002

In April 2014, we together with Roche initiated a Phase 1 clinical trial of PRX002. The study is a randomized, double-blind, placebo-controlled, single ascending dose study in healthy subjects. It is designed to assess PRX002 for safety, tolerability, pharmacokinetics and immunogenicity. As a result of this initiation, we earned a \$15.0 million milestone payment from Roche under the License Agreement, as described below.

##### Collaboration with Roche

In December 2013, we entered into a License, Development, and Commercialization Agreement, or the License Agreement, with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc., or collectively, Roche, to develop and commercialize certain antibodies that target alpha-synuclein, including PRX002, which are referred to collectively as "Licensed Products." The License Agreement became effective following the expiration of the applicable Hart-Scott-Rodino waiting period on January 17, 2014, which triggered an upfront payment to us of \$30.0 million from Roche, which we received in February 2014.

Pursuant to the License Agreement, we and Roche will collaborate to research and develop antibody products targeting alpha-synuclein. Roche will provide funding for a research collaboration between us and Roche focused on optimizing early stage antibodies targeting alpha-synuclein, potentially including incorporation of Roche's proprietary Brain Shuttle™ technology to increase delivery of therapeutic antibodies to the brain.



We filed an investigational new drug application with the U.S. Food and Drug Administration, or FDA for PRX002 and subsequently initiated a Phase 1 study in 2014. Following the Phase 1 study, Roche will be primarily responsible for

19

---

developing, obtaining and maintaining regulatory approval for, and commercializing Licensed Products. Roche will also become responsible for the clinical and commercial manufacture and supply of Licensed Products within a defined time period following the effective date of the License Agreement.

In addition to the \$30.0 million upfront payment and the clinical milestone payment of \$15.0 million triggered by the initiation of the Phase 1 study for PRX002 in the clinic, which occurred in April 2014, for PRX002, Roche is also obligated to pay the following:

- up to \$380.0 million upon the achievement of development, regulatory and various first commercial sales milestones;
- up to an additional \$175.0 million in ex-U.S. commercial sales milestones; and
- tiered, high single-digit to high double-digit royalties in the teens on ex-U.S. annual net sales, subject to certain adjustments.

In the U.S., the parties will share all development and commercialization costs, as well as profits, all of which will be allocated 70% to Roche and 30% to us, for PRX002 in the Parkinson's disease indication, as well as any other Licensed Products and/or indications for which we opt in to co-develop and co-fund. We may opt out of the co-development and cost and profit sharing on any co-developed Licensed Products and instead receive U.S. commercial sales milestones totaling up to \$155.0 million and tiered, single-digit to high double-digit royalties in the teens based on U.S. annual net sales, subject to certain adjustments, with respect to the applicable Licensed Product. In addition, we have an option under the License Agreement to co-promote PRX002 in the U.S. in the Parkinson's disease indication. If we exercise such option, we may also elect to co-promote additional Licensed Products in the U.S. approved for Parkinson's disease. Outside the U.S., Roche will have responsibility for developing and commercializing the Licensed Products.

#### February 2014 Offering

In February 2014 Elan Science One Limited, or ESOL, an indirect wholly owned subsidiary of Perrigo Company plc, or Perrigo, sold 3,182,253 ordinary shares of Prothena. The ordinary shares were sold at a price to the public of \$26.00 per ordinary share, before the underwriting discount. As a result, ESOL and Perrigo no longer owned any ordinary shares of Prothena as of such sale.

We did not receive any of the proceeds from the offering. We paid the costs associated with the sale of these ordinary shares (other than the underwriting discount, fees and disbursements of counsel for the selling shareholder) pursuant to a Subscription and Registration Rights Agreement dated November 8, 2012 by and between us, Elan and ESOL.

#### Basis of Presentation and Preparation of the Financial Statements

Our business consists of a substantial portion of Elan's former drug discovery business platform, including Neotope Biosciences Limited and its wholly owned subsidiaries Onclave Therapeutics Limited and Prothena Biosciences Inc, and related tangible assets and liabilities.

Prior to December 21, 2012, the Prothena business operated as part of Elan and not as a separate stand-alone entity. Our consolidated financial statements for the periods prior to December 21, 2012 have been prepared on a "carve-out" basis from the consolidated financial statements of Elan to represent our financial performance as if we had existed on a stand-alone basis during those periods. For additional information regarding the basis of preparation, refer to Note 2 of the "Notes to the Consolidated Financial Statements" included in Item 8 of the 2013 Form 10-K.

#### Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with Generally Accepted Accounting Principles in the United States ("U.S. GAAP"). The preparation of these consolidated financial statements requires us to make estimates and assumptions for the reported amounts of assets, liabilities, revenues, expenses and related disclosures. We believe the following policies to be critical to the judgments and estimates used in the preparation of our financial statements.

#### Revenue Recognition

Revenue is recognized when earned and non-refundable, when payment is reasonably assured, and when there is no future obligation with respect to the revenue, in accordance with the terms prescribed in the applicable contract.

#### Multiple Element Arrangements



Our revenues are generated primarily through our license, development and commercialization agreement. These types of agreements generally contain multiple elements, or deliverables, which may include (i) licenses to our technology, (ii) R&D activities to be performed on behalf of the collaborative partner, and (iii) in certain cases, services or obligations in connection with the manufacturing or supply of pre-clinical and clinical material. Payments to us under these arrangements typically include one or more of the following: non-refundable, upfront license fees; funding of research and/or development efforts; milestone payments; and royalties on future product sales. Revenue under license, development and commercialization agreements is recognized based on the performance requirements of the contract. Determinations of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature of the fees charged for deliverables and the collectability of those fees. Should changes in conditions cause management to determine that these criteria are not met for any new or modified transactions, revenue recognized could be adversely affected.

We recognize revenue related to license, development and commercialization agreements in accordance with the provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 605-25, "Revenue Recognition - Multiple-Element Arrangements." We evaluate all deliverables within an arrangement to determine whether or not they provide value on a stand-alone basis. Based on this evaluation, the deliverables are separated into units of accounting. The arrangement consideration that is fixed or determinable at the inception of the arrangement is allocated to the separate units of accounting based on their relative selling prices. We may exercise significant judgment in determining whether a deliverable is a separate unit of accounting, as well as in estimating the selling prices of such unit of accounting. A change in such judgment could result in a significant change in the period in which revenue is recognized.

To determine the selling price of a separate deliverable, we use the hierarchy as prescribed in ASC Topic 605-25 based on vendor-specific objective evidence (VSOE), third-party evidence (TPE) or best estimate of selling price (BESP). VSOE is based on the price charged when the element is sold separately and is the price actually charged for that deliverable. TPE is determined based on third party evidence for a similar deliverable when sold separately and BESP is the estimated selling price at which we would transact a sale if the elements of collaboration and license arrangements were sold on a stand-alone basis to the buyer. We may not be able to establish VSOE or TPE for the deliverables within collaboration and license arrangements, as we may not have a history of entering into such arrangements or selling the individual deliverables within such arrangements separately. In addition, there may be significant differentiation in these arrangements, which indicates that comparable third party pricing may not be available. We may determine that the selling price for the deliverables within collaboration and license arrangements should be determined using BESP. The process for determining BESP involves significant judgment on our part and includes consideration of multiple factors such as estimated direct expenses and other costs, and available data. Payments or full reimbursements resulting from our R&D efforts for those arrangements where such efforts are considered as deliverables are recognized as the services are performed and are presented on a gross basis so long as there is persuasive evidence of an arrangement, the fee is fixed or determinable, and collection of the related receivable is reasonably assured. However, such funding is recognized as a reduction of R&D expense when we engage in a R&D project jointly with another entity, with both entities participating in project activities and sharing costs and potential benefits of the project. Accordingly, reimbursement of R&D expenses pursuant to the cost-sharing provisions of our agreements with Roche is recognized as a reduction to R&D expense.

#### Milestone Revenue

We account for milestones under ASU No. 2010-17, Milestone Method of Revenue Recognition. Under the milestone method, contingent consideration received from the achievement of a substantive milestone is recognized in its entirety in the period in which the milestone is achieved. A milestone is defined as an event (i) that can only be achieved based in whole or in part on either the entity's performance or on the occurrence of a specific outcome resulting from the entity's performance, (ii) for which there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved, and (iii) that would result in additional payments being due to the entity. At the inception of an agreement that includes milestone payments, we evaluate whether each milestone is substantive and at risk to both parties on the basis of the contingent nature of the milestone. This evaluation includes an

assessment of whether (a) the consideration is commensurate with either (1) the entity's performance to achieve the milestone, or (2) the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the entity's performance to achieve the milestone, (b) the consideration relates solely to past performance, and (c) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. We evaluate factors such as the scientific, regulatory, commercial and other risks that must be overcome to achieve the respective milestone, the level of effort and investment required to achieve the respective milestone and whether the milestone consideration is reasonable relative to all deliverables and payment terms in the arrangement in making this

assessment. The conclusion as to whether milestone payments are substantive involves management judgment regarding the factors noted above.

We generally classify each of our milestones into one of three categories: (i) clinical milestones, (ii) regulatory and development milestones, and (iii) commercial milestones. Clinical milestones are typically achieved when a product candidate advances or completes a defined phase of clinical research. For example, a milestone payment may be due to us upon the initiation of a clinical trial for a new indication. Regulatory and development milestones are typically achieved upon acceptance of the submission for marketing approval of a product candidate or upon approval to market the product candidate by the FDA or other regulatory authorities. For example, a milestone payment may be due to us upon filing of a Biologics License Application (BLA) with the FDA. Commercial milestones are typically achieved when an approved pharmaceutical product reaches certain defined levels of net royalty sales by the licensee of a specified amount within a specified period.

Commercial milestone payments and milestone payments that are not deemed to be substantive will be accounted for as a contingent revenue payment with revenue recognized when all contingencies are lifted, which is expected to be upon achievement of the milestone, assuming all revenue recognition criteria are met.

#### Profit Share Revenue

For agreements, with profit sharing arrangements, we will record our share of the pre-tax commercial profit as collaboration revenue when the profit sharing can be reasonably estimated and collectability is reasonably assured. If profit sharing estimates are materially different from actual results it could impact the amount of revenue recognized in future periods. If the profit share cannot be reasonably estimated or collectability of the profit share amount is not reasonably assured, our portion of the profit share it could impact the amount of revenue recognized in future periods.

#### Royalty Revenue

We will recognize revenue from royalties based on licensees' sales of our products or products using its technologies. Royalties are recognized as earned in accordance with the contract terms when royalties from licensees can be reasonably estimated and collectability is reasonably assured. If we can no longer estimate royalty revenue or our estimates are materially different from actual results it could impact the amount of revenue recognized in future periods.

#### Share-based Compensation

We account for our share-based compensation in accordance with the fair value recognition provisions of current authoritative guidance. Share-based awards, including stock options, are measured at fair value as of the grant date and recognized to expense over the requisite service period (generally the vesting period), which we have elected to amortize on a straight-line basis. Since share-based compensation expense is based on awards ultimately expected to vest, it has been reduced by an estimate for future forfeitures. We estimate forfeitures at the time of grant and revise our estimate, if necessary, in subsequent periods. We estimate the fair value of options granted using the Black-Scholes option valuation model. Significant judgment is required in determining the proper assumptions used in these models. The assumptions used include the risk free interest rate, expected term, expected volatility and expected dividend yield. We base our assumptions on historical data when available or when not available, on a peer group of companies. However, these assumptions consist of estimates of future market conditions, which are inherently uncertain, and therefore subject to our judgment and therefore any changes in assumptions could significantly impact the future grant date fair value of share-based awards.

Total share-based compensation expense for the three months ended March 31, 2014 and 2013 was \$1.3 million, and \$0.3 million, respectively.

#### Recent Accounting Pronouncements

As an emerging growth company under the JOBS Act, unlike other public companies, we are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. We have an extended transition period for adopting new or revised accounting standards that have different effective dates for public and private companies until such time as those standards apply to private companies.

Except as described in Note 2 to the Condensed Consolidated Financial Statements under the heading "Recent Accounting Pronouncements", there have been no new accounting pronouncements or changes to accounting

pronouncements during the three months ended March 31, 2014, as compared to the recent accounting pronouncements described in our 2013 Form 10-K, that are of significance or potential significance to us.

## Results of Operations

## Comparison of Three Months Ended March 31, 2014 and 2013

## Revenue

	Three Months Ended March 31,		Percentage
	2014	2013	Change
	(Dollars in thousands)		2014/2013
Collaboration revenue	\$ 32,096	\$—	nm
Revenue—related party	138	171	(19)%
Total revenue	\$ 32,234	\$ 171	nm

nm = not meaningful

Total revenue for the three months ended March 31, 2014 and 2013 was \$32.2 million compared to \$0.2 million, respectively. Collaboration revenue includes reimbursements under our License Agreement with Roche, which became effective January 22, 2014. Collaboration revenue for the three months ended March 31, 2014 consisted of a one-time, non-refundable, non-creditable upfront payment of \$30.0 million, reimbursement for development costs of \$2.0 million, of which, \$1.8 million was recognized as collaboration license revenue and reimbursement of \$0.3 million for research services.

We are eligible to receive a \$15.0 million payment from Roche upon achievement of a clinical milestone related to the initiation of the Phase 1 study for PRX002 in the clinic, which occurred in April 2014.

Related-party revenue for the three months ended March 31, 2014 and 2013 was comprised of fees earned from the provision of research and development services to Elan (acquired by Perrigo). Total related-party revenue decreased by \$33,000, or 19%, during the three months ended March 31, 2014 compared to the prior year due to a reduction in the scope of the R&D services provided to Elan.

## Operating Expenses

	Three Months Ended March 31,		Percentage
	2014	2013	Change
	(Dollars in thousands)		2014/2013
Research and development	\$ 9,342	5,957	57%
General and administrative	4,873	3,181	53%
Total operating expenses	\$ 14,215	\$ 9,138	56%

Total operating expenses consist of research and development, or R&D expense and general and administrative, or G&A, expenses. Our operating expenses for the three months ended March 31, 2014 and 2013 were \$14.2 million and \$9.1 million, respectively. Our R&D expenses primarily consisted of personnel costs and related expenses including share-based compensation, external costs associated with preclinical activities and regulatory operations related to our drug programs, including NEOD001, PRX002, PRX003 and our discovery programs, and costs of providing research services to Elan's ELND005 program. Pursuant to our License Agreement with Roche, in 2014 we began making payments to Roche for our share of the development expenses incurred by Roche related to PRX002 programs, which is included in our R&D expense. We recorded reimbursements from Roche for development and supply services based on the relative percentages as an offset to R&D expense. Our G&A expenses primarily consist of professional services expenses and personnel costs and related expenses, including share-based compensation.

## Research and Development Expenses

Our R&D expenses increased by \$3.4 million, or 57%, for the three months ended March 31, 2014 compared to the same period in the prior year. The increase for the three months ended March 31, 2014 compared with the same period in the prior year



was primarily due to increased external expenses, related to drug development and drug manufacturing primarily associated with our PRX002 and PRX003 programs and higher personnel costs including share-based compensation expenses.

We expect our R&D expenses to increase in 2014 primarily due to increased spending for the with the manufacturing costs and IND enabling toxicology studies for PRX003, the initiation of a Phase 2/3 clinical trial for NEOD001 and higher costs associated with development and manufacturing costs incurred under our cost-sharing arrangement with Roche including the initiation of a Phase 1 clinical trial for PRX002.

Our research activities are aimed at developing new drug products. Our development activities involve the translation of our research into potential new drugs. R&D expenses include personnel, materials, equipment and facilities costs that are allocated to clearly related R&D activities.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete development of our product candidates. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

- the scope, rate of progress and expense of our drug discovery efforts and other R&D activities;
- the potential benefits of our product candidates over other therapies;
- clinical trial results; and
- the terms and timing of regulatory approvals.

A change in the outcome of any of these 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 authority were to require us to conduct clinical trials beyond those which we currently anticipate will be required for the completion of clinical development of a product candidate or if we experience significant delays in enrollment in any clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

The following table sets forth the R&D expenses for our major program (specifically, any program with successful first patient dosing in a Phase 1 clinical trial) NEOD001, PRX002 and other R&D expenses for the three months ended March 31, 2014 and 2013, and the cumulative amounts to date (in thousands):

	Three Months Ended March 31,		Cumulative to Date
	2014	2013	
NEOD001 <sup>(1)</sup>	\$1,474	\$866	\$28,710
PRX002 <sup>(2)</sup>	2,571	1,979	23,508
Other R&D <sup>(3)</sup>	5,297	3,112	
	\$9,342	\$5,957	

Cumulative R&D costs to date for NEOD001 include the costs incurred from the date when the program has been <sup>(1)</sup> separately tracked in preclinical development. Expenditures in the early discovery stage are not tracked by program and accordingly have been excluded from this cumulative amount.

Cumulative R&D costs to date for PRX002 include the costs incurred from the date when the program has been <sup>(2)</sup> separately tracked in preclinical development. Expenditures in the early discovery stage are not tracked by program and accordingly have been excluded from this cumulative amount.

Other R&D is comprised of preclinical development and discovery programs that have not had successful first <sup>(3)</sup> patient dosing in a Phase 1 clinical trial, including PRX003, and research costs we incurred in providing research services to Elan's ELND005 program.

#### General and Administrative Expenses

Our G&A expenses increased by \$1.7 million, or 53%, for the three months ended March 31, 2014 compared to the same period in prior year. The increase in expenses over the prior year related primarily to higher personnel costs including share-based compensation expenses and increased legal costs associated with being a public company.

The Company expects G&A expenses to increase in 2014 over the prior year primarily due to increases in personnel, legal and other administrative expenses associated with a growing public company.

## Other Income (Expense)

	Three Months Ended March 31,		Percentage
	2014	2013	Change
	(Dollars in thousands)		2014/2013
Interest income	\$ 19	\$ 22	(14 )%
Other income (expense), net	(35	) —	nm
Total Other Income (Expense)	\$ (16	) 22	(173 )%

nm = not meaningful

Interest income decreased by \$3,000 for the three months ended March 31, 2014 compared to the same period in prior year primarily due to lower interest earned on our cash and money market accounts. Other income (expense), net was primarily due to foreign exchange losses from transactions with vendors denominated in Euros.

## Provision for Income Taxes

	Three Months Ended March 31,		Percentage
	2014	2013	Change
	(Dollars in thousands)		2014/2013
Provision for income taxes	\$ 151	6	nm

The tax provision for the three months ended March 31, 2014 and 2013, was \$151,000 and \$6,000, respectively. The tax provision reflects U.S. federal taxes associated with nominal, recurring profits attributable to intercompany services that the Company's U.S. subsidiary performs for the Company. No tax benefit has been recorded related to tax losses recognized in Ireland and any deferred tax assets for those losses are offset by a valuation allowance.

## Liquidity and Capital Resources

## Overview

	March 31,	December 31,
	2014	2013
Working capital	\$ 190,634	\$ 170,816
Cash and cash equivalents	195,052	176,677
Total assets	203,810	182,410
Other non-current liabilities	1,835	1,734
Total liabilities	10,799	9,140
Total shareholders' equity	193,011	173,270

Working capital was \$190.6 million at March 31, 2014, an increase of \$19.8 million from working capital as of December 31, 2013. This increase was principally attributable to a higher net cash and cash equivalents balance of \$18.4 million primarily due to the \$30.0 million upfront payment from Roche.

As of March 31, 2014, we had \$195.1 million in cash and cash equivalents which includes the \$30.0 million upfront payment we received in February 2014 from Roche pursuant to the License Agreement. In addition, we are eligible to receive a \$15.0 million payment from Roche upon achievement of a clinical milestone related to the initiation of the Phase 1 study for PRX002 in the clinic, which occurred in April 2014. Although we believe, based on our current business plans, that our existing cash and cash equivalents will be sufficient to meet our obligations for at least the next twelve months, we anticipate that we will require additional

capital in the future in order to continue the research and development of our drug candidates. As of March 31, 2014, \$7.1 million of our outstanding cash and cash equivalents related to U.S. operations that management asserted was permanently reinvested. If these funds were repatriated back to Ireland we would incur a withholding tax from the dividend distribution.

We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the development of our product candidates. Our future capital requirements will depend on numerous factors, including, without limitation, the timing of initiation, progress, results and costs of our clinical trials; the results of our research and preclinical studies; the costs of clinical manufacturing and of establishing commercial manufacturing arrangements; the costs of preparing, filing, and prosecuting patent applications and maintaining, enforcing, and defending intellectual property-related claims; the costs and timing of capital asset purchases; our ability to establish research collaborations, strategic collaborations, licensing or other arrangements; the costs to satisfy our obligations under current and potential future collaborations; and the timing, receipt, and amount of revenues or royalties, if any, from any approved drug candidates. Pursuant to the License Agreement with Roche, in the U.S., we and Roche will share all development and commercialization costs, as well as profits, all of which will be allocated 70% to Roche and 30% to us, for PRX002 in the Parkinson's disease indication, as well as any other Licensed Products and/or indications for which we opt in to co-develop and co-fund. In order to develop and obtain regulatory approval for our potential products we may need to raise substantial additional funds. We expect to raise any such additional funds through public or private equity or debt financings, collaborative agreements with corporate partners or other arrangements. We cannot assume that such additional financings will be available on acceptable terms, if at all, and such financings may only be available on terms dilutive to our shareholders.

#### Cash Flows for the Three Months Ended March 31, 2014 and 2013

The following table summarizes, for the periods indicated, selected items in our Consolidated Statements of Cash Flows (in thousands):

	Three Months Ended March 31,	
	2014	2013
Net cash provided by (used in) operating activities	\$17,894	\$(5,103)
Net cash used in investing activities	(26)	(110)
Net cash provided by (used in) financing activities	507	(84)
Net increase (decrease) in cash and cash equivalents	\$18,375	\$(5,297)
Cash Provided by (Used in) Operating Activities		

Net cash provided by operating activities was \$17.9 million for three months ended March 31, 2014 primarily due to receipt of the upfront payment of \$30.0 million from Roche partially offset by \$14.2 million in expenses and adjusted to exclude non-cash charges and increases in accrued liabilities. Net cash used in operating activities was \$5.1 million for the three months ended March 31, 2013 consisting primarily of net losses (adjusted to exclude non-cash charges) offset by increases to accounts payable and other liabilities.

#### Cash Used in Investing Activities

Net cash used in investing activities was \$26,000 and \$110,000 for the three months ended March 31, 2014 and 2013, respectively, consisting of purchases of property and equipment.

#### Cash Provided by (Used in) Financing Activities

Net cash provided by financing activities for the three months ended March 31, 2014 was \$0.5 million primarily consisting of proceeds from issuance of common stock upon exercise of stock options. Net cash used in financing activities was \$0.1 million for the three months ended March 31, 2013, consisted of the final settlement of liabilities as a result of our separation from Elan.

#### Off-Balance Sheet Arrangements

At March 31, 2014, we were not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our financial condition, changes in financial condition, revenue or expenses, results

of operations, liquidity, capital expenditures or capital resources.

26

---

### Contractual Obligations

Our main contractual obligations as of March 31, 2014 consist of operating leases of \$13.0 million, contractual obligations under license agreements of \$1.0 million and purchase obligations of \$4.7 million of which \$3.2 million is included in the accrued current liabilities. Operating leases represent our future minimum rental commitments under our operating leases. Purchase obligations represent our non-cancelable purchase commitments to suppliers.

The following is a summary of our contractual obligations as of March 31, 2014 (in thousands):

	Total	2014 (remaining 9 months)	2015	2016	2017	2018	Thereafter
Operating leases	\$ 12,994	\$ 980	\$ 1,756	\$ 1,930	\$ 2,009	\$ 2,089	\$ 4,230
Purchase Obligations	4,741	4,741	—	—	—	—	—
Contractual obligations under license agreements <sup>(1)</sup>	1,049	64	85	85	85	85	645
Total	\$ 18,784	\$ 5,785	\$ 1,841	\$ 2,015	\$ 2,094	\$ 2,174	\$ 4,875

<sup>(1)</sup> Excludes future obligations pursuant to the cost-sharing arrangement under our License Agreement with Roche. Amounts of such obligations, if any, cannot be determined at this time.

### ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

#### Foreign Currency Risk

Our business is primarily conducted in U.S. dollars except for our agreement with our contract manufacturer for clinical supplies which is denominated in Euros. We recorded a loss on foreign currency exchange rate differences of approximately \$36,000 during the three months ended March 31, 2014. At this time, we do not believe that our foreign exchange risk is material. However, if we continue or increase our business activities that require the use of foreign currencies, we may incur further losses if the Euro and other such currencies strengthen against the U.S. dollar.

#### Interest Rate Risk

Our exposure to interest rate risk is limited to our cash equivalents, which consist of accounts maintained in money market funds. We have assessed that there is no material exposure to interest rate risk given the nature of money market funds. In general, money market funds are not subject to interest rate risk because the interest paid on such funds fluctuates with the prevailing interest rate. Accordingly, our interest income fluctuates with short-term market conditions.

In the future, we anticipate that our exposure to interest rate risk will primarily be related to our investment portfolio. We intend to invest any surplus funds in accordance with a policy approved by our board of directors which will specify the categories, allocations, and ratings of securities we may consider for investment. The primary objectives of our investment policy are to preserve principal and maintain proper liquidity to meet our operating requirements. Our investment policy also specifies credit quality standards for our investments and limits the amount of credit exposure to any single issue, issuer or type of investment.

#### Credit Risk

Our accounts receivables are due from two customers, Roche our collaboration partner and Elan (acquired by Perrigo) to whom we provide R&D services. We do not believe that our credit risk is significant. As of March 31, 2014, our receivables from these customers totaled \$2.2 million.

Financial instruments that potentially subject us to concentration of credit risk consist of cash and cash equivalents and accounts receivable. We place our cash and cash equivalents with high credit quality financial institutions and pursuant to our investment policy, we limit the amount of credit exposure with any one financial institution. Deposits held with banks may exceed the amount of insurance provided on such deposits. We have not experienced any losses on our deposits of cash and cash equivalents.



#### ITEM 4. CONTROLS AND PROCEDURES

##### Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer, or CEO, and chief financial officer, or CFO, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (Exchange Act), as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our CEO and CFO concluded that, as of March 31, 2014, our disclosure controls and procedures are designed and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

##### Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during our first fiscal quarter ended March 31, 2014 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.



## PART II. OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS

We are not currently a party to any material legal proceedings. We may at times be involved in litigation and other legal claims in the ordinary course of business. When appropriate in management's estimation, we may record reserves in our financial statements for pending litigation and other claims.

### ITEM 1A. RISK FACTORS

Investing in our ordinary shares involves a high degree of risk. Our Annual Report on Form 10-K for 2013 includes a detailed discussion of our business and the risks to our business. You should carefully read that Form 10-K. You should also read and carefully consider the risks described below and the other information in this Quarterly Report on Form 10-Q. If any of such risks actually occur, our business, operating results, financial condition, cash flows or growth prospects would be adversely affected. As a result, the market price of our ordinary shares could decline, and you could lose all or part of your investment. Additional risks and uncertainties that have not yet identified or that we currently think are immaterial could also have a material adverse affect our business, operating results, financial condition, cash flows or growth prospects, and could result in a loss of all or part of your investment.

#### Risks Relating to Our Financial Position, Our Need for Additional Capital and Our Business

We anticipate that we will incur losses for the foreseeable future and we may never sustain profitability.

We may not generate the cash that is necessary to finance our operations in the foreseeable future. We earned net income of \$17.9 million for the three months ended March 31, 2014 and incurred losses of \$41.0 million and \$41.4 million for the years ended December 31, 2013 and 2012, respectively. Although we achieved net income in the first quarter of 2014, primarily as a result of the \$30.0 million upfront milestone payment under the License Agreement, we expect to incur substantial losses for the foreseeable future as we:

- conduct our Phase 1 clinical trials for NEOD001 and PRX002 and initiate additional clinical trials, if supported by the results of these Phase 1 trials;
- develop and commercialize our product candidates, including NEOD001, PRX002 and PRX003 and any other antibodies targeting alpha-synuclein pursuant to our License Agreement with Roche;
- complete preclinical development of other product candidates and initiate clinical trials, if supported by positive preclinical data; and
- pursue our early stage research and seek to identify additional drug candidates and potentially acquire rights from third parties to drug candidates through licenses, acquisitions or other means.

We must generate significant revenue to achieve profitability. Even if we succeed in discovering, developing and commercializing one or more drug candidates, we may not be able to generate sufficient revenue and we may never be able to sustain profitability.

We will require additional capital to fund our operations, and if we are unable to obtain such capital, we will be unable to successfully develop and commercialize drug candidates.

As of March 31, 2014, we had cash and cash equivalents of \$195.1 million. In addition, we earned a \$15.0 million clinical milestone payment from Roche in April 2014. Although we believe, based on our current business plans, that our existing cash and cash equivalents will be sufficient to meet our obligations for at least the next twelve months, we anticipate that we will require additional capital in the future in order to continue the research and development of our drug candidates. Our future capital requirements will depend on many factors that are currently unknown to us, including, without limitation:

the timing of initiation, progress, results and costs of our clinical trials, including our Phase 1 clinical trials for NEOD001 and PRX002, and our development and commercialization activities, including our portion of similar costs relating to PRX002 in the United States pursuant to our License Agreement with Roche;

- the results of our research and preclinical studies;
- the costs of clinical manufacturing and of establishing commercial manufacturing arrangements;
- the costs of preparing, filing, and prosecuting patent applications and maintaining, enforcing, and defending intellectual property-related claims;
- our ability to establish research collaborations, strategic collaborations, licensing or other arrangements;
- the costs to satisfy our obligations under potential future collaborations; and
- the timing, receipt, and amount of revenues or royalties, if any, from any approved drug candidates.

We have based our expectations relating to liquidity and capital resources on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the development of our current product candidates.

We are not able to provide specific estimates of the timelines or total costs to complete the ongoing Phase 1 clinical trial for NEOD001 or PRX002. Under the License Agreement with Roche, we are responsible for 30% of all development and commercialization costs for PRX002 for the treatment of Parkinson's disease in the United States, and for any future Licensed Products and/or indications that we opt to co-develop in the United States, in each case unless we elect to opt out of profit and loss sharing. Our right to co-develop PRX002 and other Licensed Products under the License Agreement will terminate if we commence certain studies for a competitive product that treats Parkinson's disease or other indications that we opted to co-develop. In addition, our right to co-promote PRX002 and other Licensed Products will terminate if we commence a Phase 3 study for a competitive product that treats Parkinson's disease.

In the pharmaceutical industry, the research and development process is lengthy and involves a high degree of risk and uncertainty. This process is conducted in various stages and, during each stage, there is a substantial risk that product candidates in our research and development pipeline will experience difficulties, delays or failures. This makes it difficult to estimate the total costs to complete our ongoing clinical trials and to estimate anticipated completion dates with any degree of accuracy, which raises concerns that attempts to quantify costs and provide estimates of timing may be misleading by implying a greater degree of certainty than actually exists.

In order to develop and obtain regulatory approval for our product candidates we will need to raise substantial additional funds. We expect to raise any such additional funds through public or private equity or debt financings, collaborative agreements with corporate partners or other arrangements. We cannot assure you that additional funds will be available when we need them on terms that are acceptable to us, or at all. General market conditions may make it very difficult for us to seek financing from the capital markets. If we raise additional funds by issuing equity securities, substantial dilution to existing shareholders would result. If we raise additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict our ability to operate our business. We may be required to relinquish rights to our technologies or drug candidates or grant licenses on terms that are not favorable to us in order to raise additional funds through strategic alliances, joint ventures or licensing arrangements.

If adequate funds are not available on a timely basis, we may be required to:

- terminate or delay clinical trials or other development for one or more of our drug candidates;
- delay arrangements for activities that may be necessary to commercialize our drug candidates;
- curtail or eliminate our drug research and development programs that are designed to identify new drug candidates; or
- cease operations.

In addition, if we do not meet our payment obligations to third parties as they come due, we may be subject to litigation claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and distract management, and may have unfavorable results that could further adversely impact our financial condition.

Our historical financial information is not necessarily representative of the results we would have achieved as a separate, publicly traded company and may not be a reliable indicator of our future results.

Our financial results previously were included within the consolidated results of Elan; however, we were not directly subject to the reporting and other requirements of the Exchange Act until our separation from Elan on December 20, 2012, which we refer

30

---

to in this Report as the “Separation and Distribution.” The historical financial information we have included or incorporated by reference in this report may not reflect what our results of operations, financial position and cash flows would have been had we been an independent, publicly traded company during the periods presented or what our results of operations, financial position and cash flows will be in the future. This is primarily because:

- our historical financial information reflects allocations for services historically provided to us by Elan, which allocations may not reflect the costs we will incur for similar services in the future as an independent company;

subsequent to the completion of the Separation and Distribution, the cost of capital for our business may be higher than Elan’s cost of capital prior to the Separation and Distribution because Elan’s current cost of debt will likely be lower than ours; and

our historical financial information does not reflect changes that we have incurred as a result of the separation of the Prothena Business from Elan, including changes in the cost structure, personnel needs, financing and operations of the contributed business as a result of the separation from Elan and from reduced economies of scale.

We are also responsible for the additional costs associated with being an independent, public company, including costs related to corporate governance and compliance with the rules of The NASDAQ Global Select Market, or NASDAQ, and the SEC. In addition, we incur costs and expenses, including professional fees, to comply with Irish corporate and tax laws and financial reporting requirements and costs and expenses incurred in connection with holding the meetings of our board of directors, or our Board, in Ireland. Prior to the Separation and Distribution, the Prothena Business was operated by Elan as part of its broader corporate organization, rather than as an independent company. Elan or one of its affiliates performed various corporate functions for us, including, but not limited to, legal, treasury, accounting, auditing, risk management, information technology, human resources, corporate affairs, tax administration, certain governance functions and external reporting. Our historical financial results include allocations of corporate expenses from Elan for these and similar functions. These allocations of cash and non-cash expenses are less than the comparable expenses we have incurred thus far as a separate publicly traded company. Therefore, our consolidated Financial Statements may not be indicative of our future performance as an independent company. For additional information about our past financial performance and the basis of presentation of our consolidated Financial Statements, please see “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated Financial Statements and the notes thereto included in the periodic reports filed with the SEC that are incorporated by reference into this Report and our other periodic reports filed with the SEC..

Our future success depends on our ability to retain key personnel and to attract, retain and motivate qualified personnel.

We are highly dependent on key personnel, including Dr. Dale Schenk, our President and Chief Executive Officer. There can be no assurance that we will be able to retain Dr. Schenk or any of our key personnel. The loss of the services of Dr. Schenk or any other person on which we become highly dependent might impede the achievement of our research and development objectives. Recruiting and retaining qualified scientific personnel will also be critical to our success. 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. We also experience competition for the hiring of scientific personnel from universities and research institutions.

Our collaborators, prospective collaborators and suppliers may need assurances that our financial resources and stability on a stand-alone basis are sufficient to satisfy their requirements for doing or continuing to do business with us.

Some of our collaborators, prospective collaborators and suppliers may need assurances that our financial resources and stability on a stand-alone basis are sufficient to satisfy their requirements for doing or continuing to do business with us. If our collaborators, prospective collaborators or suppliers are not satisfied with our financial resources and stability, it could have a material adverse effect on our ability to develop our drug candidates, enter into licenses or other agreements and on our business, financial condition or results of operations.

The agreements we have entered into with Elan involve conflicts of interest and therefore may have materially disadvantageous terms to us.

We have entered into certain agreements with Elan in connection with the Separation and Distribution, which set forth the main terms of the separation and provide a framework for our initial relationship with Elan. These agreements may have terms that are materially disadvantageous to us or are otherwise not as favorable as those that might be negotiated between unaffiliated third parties. In December 2013, Elan was acquired by Perrigo and in February 2014, Perrigo caused Elan to sell all of its shares of Prothena in an underwritten offering. As a result of the acquisition of Elan by Perrigo and the subsequent sale of all of its shares of Prothena, Perrigo/Elan may be less willing to collaborate with us in connection with the agreements to which we and Elan are a party and other matters.

### Risks Related to the Discovery, Development and Regulatory Approval of Drug Candidates

Our success is largely dependent on the success of our research and development programs, which are at an early stage. Our drug candidates are still in early stages of development and we may not be able to successfully discover, develop, obtain regulatory approval for or commercialize any drug candidates.

The success of our business depends substantially upon our ability to discover, develop, obtain regulatory approval for and commercialize our drug candidates successfully. Our research and development programs are prone to the significant and likely risks of failure inherent in drug development. We intend to continue to invest most of our time and financial resources in our research and development programs. Although we have initiated Phase 1 clinical trials for each of NEOD001 and PRX002, there is no assurance that these clinical trials will support further development of these drug candidates. In addition, we currently do not, and may never, have any other drug candidates in clinical trials, and we have not identified drug candidates for many of our research programs.

Before obtaining regulatory approvals for the commercial sale of any drug candidate for a target indication, we must demonstrate with substantial evidence gathered in adequate and well-controlled clinical trials, and, with respect to approval in the United States, to the satisfaction of the FDA or, with respect to approval in other countries, similar regulatory authorities in those countries, that the drug candidate is safe and effective for use for that target indication. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain, and subject to unanticipated delays. Despite our efforts, our drug candidates may not:

- offer improvement over existing, comparable products;
- be proven safe and effective in clinical trials; or
- meet applicable regulatory standards.

Positive results in preclinical studies of a drug candidate may not be predictive of similar results in humans during clinical trials, and promising results from early clinical trials of a drug candidate may not be replicated in later clinical trials. Interim results of a clinical trial do not necessarily predict final results. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in early-stage development. Accordingly, the results from completed preclinical studies and clinical trials for our drug candidates may not be predictive of the results we may obtain in later stage trials or studies. Our preclinical studies or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials, or to discontinue clinical trials altogether.

Furthermore, we have not marketed, distributed or sold any products. Our success will, in addition to the factors discussed above, depend on the successful commercialization of our drug candidates, which may require:

- obtaining and maintaining commercial manufacturing arrangements with third-party manufacturers;
- collaborating with pharmaceutical companies or contract sales organizations to market and sell any approved drug; or
- acceptance of any approved drug in the medical community and by patients and third-party payors.

Many of these factors are beyond our control. We do not expect any of our drug candidates to be commercially available for several years and some or all may never become commercially available. Accordingly, we may never generate revenues through the sale of products.

If clinical trials of our drug candidates are prolonged, delayed, suspended or terminated, we may be unable to commercialize our drug candidates on a timely basis, which would require us to incur additional costs and delay our receipt of any revenue from potential product sales.

We cannot predict whether we will encounter problems with our Phase 1 clinical trials for NEOD001 or PRX002, or any future clinical trials that will cause us or any regulatory authority to delay or suspend those clinical trials or delay the analysis of data derived from them. A number of events, including any of the following, could delay the completion of our planned clinical trials and negatively impact our ability to obtain regulatory approval for, and to market and sell, a particular drug candidate:

- conditions imposed on us by the FDA or any foreign regulatory authority regarding the scope or design of our clinical trials;
- delays in obtaining, or our inability to obtain, required approvals from institutional review boards, or IRBs, or other reviewing entities at clinical sites selected for participation in our clinical trials;



insufficient supply or deficient quality of our drug candidates or other materials necessary to conduct our clinical trials;

- delays in obtaining regulatory agency agreement for the conduct of our clinical trials;
- lower than anticipated enrollment and retention rate of subjects in clinical trials for a variety of reasons, including size of patient population, nature of trial protocol, the availability of approved effective treatments for the relevant disease and competition from other clinical trial programs for similar indications;
- serious and unexpected drug-related side effects experienced by patients in clinical trials; or
- failure of our third-party contractors to meet their contractual obligations to us in a timely manner.

Clinical trials may also be delayed or terminated as a result of ambiguous or negative interim results. In addition, a clinical trial may be suspended or terminated by us, the FDA, the IRBs at the sites where the IRBs are overseeing a trial, or a data safety monitoring board, or DSMB, overseeing the clinical trial at issue, or other regulatory authorities due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- inspection of the clinical trial operations or trial sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;
- varying interpretation of data by the FDA or other regulatory authorities;
- requirement by the FDA or other regulatory authorities to perform additional studies;
- failure to achieve primary or secondary endpoints or other failure to demonstrate efficacy;
- unforeseen safety issues; or
- lack of adequate funding to continue the clinical trial.

Additionally, changes in regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes. Amendments may require us to resubmit our clinical trial protocols to regulatory authorities and IRBs for reexamination, which may impact the cost, timing or successful completion of a clinical trial. We do not know whether our clinical trials will be conducted as planned, will need to be restructured or will be completed on schedule, if at all. Delays in our clinical trials will result in increased development costs for our drug candidates. In addition, if we experience delays in the completion of, or if we terminate, any of our clinical trials, the commercial prospects for our drug candidates may be harmed and our ability to generate product revenues will be jeopardized. Furthermore, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of a drug candidate.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our drug candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign authorities is inherently unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a drug candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any drug candidate and it is possible that none of our existing drug candidates or any drug candidates we may seek to develop in the future will ever obtain regulatory approval.

Our drug candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a drug candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;





- we may be unable to demonstrate that a drug candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our drug candidates may not be sufficient to support the submission of a Biologics License Application, or BLA, or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; or
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our drug candidates, which would significantly harm our business, results of operations and prospects. In addition, even if we were to obtain approval, regulatory authorities may approve any of our drug candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a drug candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that drug candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our drug candidates.

We rely on obtaining and maintaining orphan drug exclusivity for NEOD001, if approved, but cannot ensure that we will enjoy market exclusivity in a particular market.

NEOD001 has been granted orphan drug designation by the FDA for the treatment of AL and AA amyloidosis and by the European Medicines Agency, or EMA, for the treatment of AL amyloidosis. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is intended to treat a rare disease or condition, defined as a disease or condition that affects a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the European Union, the EMA's Committee for Orphan Medicinal Products, or COMP, grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention, or treatment of a life-threatening or chronically debilitating condition affecting not more than five in 10,000 persons in the European Union. Additionally, designation is granted for products intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition when, without incentives, it is unlikely that sales of the drug in the European Union would be sufficient to justify the necessary investment in developing the drug or biological product or where there is no satisfactory method of diagnosis, prevention, or treatment, or, if such a method exists, the medicine must be of significant benefit to those affected by the condition.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user-fee waivers. In addition, if a product receives the first FDA approval for the indication for which it has orphan designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity or where the manufacturer is unable to assure sufficient product quantity. In the European Union, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers and ten years of market exclusivity following drug or biological product approval. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity.

Even though we have obtained orphan drug designation for NEOD001 in the United States and Europe, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing pharmaceutical products. Further, even if we obtain orphan drug designation for a product, that exclusivity may not effectively protect the product from competition from different drugs with different active moieties which may be approved for the same condition. Orphan drug designation neither shortens the development time or regulatory

review time of a drug nor gives the drug any advantage in the regulatory review or approval process. Even if one of our drug candidates receives orphan exclusivity, the FDA may still approve other drugs that have a different active ingredient for use in treating the same indication or disease, or may approve an application to market the same drug for the same indication that shows clinical superiority over our product. Furthermore, the FDA may waive orphan exclusivity if we are unable to manufacture sufficient supply of our product.

Even if our drug candidates receive regulatory approval in the United States, we may never receive approval or commercialize our products outside of the United States.

In order to market any products outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in the United States as well as other risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. Failure to obtain regulatory approval in other countries or any delay or setback in obtaining such approval would impair our ability to develop foreign markets for our drug candidates.

Both before and after marketing approval, our drug candidates are subject to ongoing regulatory requirements and continued regulatory review, and if we fail to comply with these continuing requirements, we could be subject to a variety of sanctions and the sale of any approved products could be suspended.

Both before and after regulatory approval to market a particular drug candidate, the manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, distribution and record keeping related to the product are subject to extensive, ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with current good manufacturing practice, or cGMP, requirements and current good clinical practice, or cGCP, requirements for any clinical trials that we conduct post-approval. Any regulatory approvals that we receive for our drug candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase IV clinical trials, and surveillance to monitor the safety and efficacy of the drug candidate. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with the regulatory requirements of the FDA and other applicable U.S. and foreign regulatory authorities could subject us to administrative or judicially imposed sanctions, including:

- restrictions on the marketing of our products or their manufacturing processes;
- warning letters;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import or export bans;
- voluntary or mandatory product recalls and related publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new products or supplements to approved applications.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our drug candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

If side effects are identified during the time our drug candidates are in development or after they are approved and on the market, we may choose to or be required to perform lengthy additional clinical trials, discontinue development of the affected drug candidate, change the labeling of any such products, or withdraw any such products from the market, any of which would hinder or preclude our ability to generate revenues.

Undesirable side effects caused by our drug candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. The drug-related side effects could affect patient recruitment or the ability of

enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects

35

---

significantly. Even if any of our drug candidates receives marketing approval, as greater numbers of patients use a drug following its approval, an increase in the incidence of side effects or the incidence of other post-approval problems that were not seen or anticipated during pre-approval clinical trials could result in a number of potentially significant negative consequences, including:

- regulatory authorities may withdraw their approval of the product;
- regulatory authorities may require the addition of labeling statements, such as warnings or contraindications;
- we may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could substantially increase the costs and expenses of developing, commercializing and marketing any such drug candidates or could harm or prevent sales of any approved products.

We deal with hazardous materials and must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Some of our research and development activities involve the controlled storage, use, and disposal of hazardous materials. We are subject to federal, state, and local laws and regulations governing the use, manufacture, storage, handling, and disposal of these hazardous materials. Although we believe that our safety procedures for the handling and disposing of these materials comply with the standards prescribed by these laws and regulations, we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident, state or federal authorities may curtail our use of these materials, and we could be liable for any civil damages that result, which may exceed our financial resources and may seriously harm our business. Because we believe that our laboratory and materials handling policies and practices sufficiently mitigate the likelihood of materials liability or third-party claims, we currently carry no insurance covering such claims. An accident could damage, or force us to shut down, our operations.

#### Risks Related to the Commercialization of Our Drug Candidates

Even if any of our drug candidates receives regulatory approval, if such approved product does not achieve broad market acceptance, the revenues that we generate from sales of the product will be limited.

Even if any drug candidates we may develop or acquire in the future obtain regulatory approval, they may not gain broad market acceptance among physicians, healthcare payors, patients and the medical community. The degree of market acceptance for any approved drug candidate will depend on a number of factors, including:

- the indication and label for the product and the timing of introduction of competitive products;
- demonstration of clinical safety and efficacy compared to other products;
- prevalence and severity of adverse side effects;
- availability of coverage and adequate reimbursement from managed care plans and other third-party payors;
- convenience and ease of administration;
- cost-effectiveness;
- other potential advantages of alternative treatment methods; and
- the effectiveness of marketing and distribution support of the product.

Consequently, even if we discover, develop and commercialize a product, the product may fail to achieve broad market acceptance and we may not be able to generate significant revenue from the product.

The success of PRX002 in the U.S. is dependent upon the strength and performance of our collaboration with Roche. If we fail to maintain our existing collaboration with Roche, such termination would likely have a material adverse effect on our ability to commercialize PRX002 and our business. Furthermore, if we opt out of profit and loss sharing with Roche, our

revenues from PRX002 will be reduced.

The success of sales of PRX002 in the U.S. will be dependent on the ability of Roche to successfully develop in collaboration with us, and launch and commercialize PRX002, if approved by the FDA, pursuant to the License Agreement we entered into in December 2013. Our collaboration with Roche is complex, particularly in the context of our U.S. commercialization of PRX002, with respect to financial provisions, allocations of responsibilities, cost estimates and the respective rights of the parties in decision making. Accordingly, significant aspects of the commercialization of PRX002 require Roche to execute its responsibilities under the arrangement, or require Roche's agreement or approval, prior to implementation, which could cause significant delays that may materially impact the potential success of PRX002 in the U.S. In addition, Roche may under some circumstances independently develop products that compete with PRX002, or Roche may decide to not commit sufficient resources to the marketing and distribution of PRX002. If we are not able to collaborate effectively with Roche on plans and efforts to develop and commercialize PRX002, our business could be materially adversely affected.

Furthermore, the terms of the License Agreement provide that Roche has the ability to terminate such arrangement for any reason after the first anniversary of the License Agreement at any time upon 90 days' notice (if prior to first commercial sale) or 180 days' notice (if after first commercial sale). For example, Roche may determine that the outcomes of clinical trials have made PRX002 a less attractive commercial product and terminate our collaboration. If the License Agreement is terminated, our business and our ability to generate revenue from sales of PRX002 could be substantially harmed as we will be required to develop our own sales and marketing organization or enter into another strategic collaboration in order to commercialize PRX002 in the U.S. Such efforts may not be successful and, even if successful, would require substantial time and resources to carry out

The manner in which Roche launches PRX002, including the timing of launch and potential pricing, will have a significant impact on the ultimate success of PRX002 in the U.S., and the success of the overall commercial arrangement with Roche. If launch of commercial sales of PRX002 in the U.S. by Roche is delayed or prevented, our revenue will suffer and our stock price may decline. Further, if launch and resulting sales by Roche are not deemed successful, our business would be harmed and our stock price may decline. Any lesser effort by Roche in its PRX002 sales and marketing efforts may result in lower revenue and thus lower profits with respect to the U.S. The outcome of Roche's commercialization efforts in the United States could also have a negative effect on investors' perception of potential sales of PRX002 outside of the U.S., which could also cause a decline in our stock price.

Furthermore, pursuant to the License Agreement, we are responsible for 30% of all development and commercialization costs for PRX002 for the treatment of Parkinson's disease in the U.S., and for any future Licensed Products and/or indications that we opt to co-develop, in each case unless we elect to opt out of profit and loss sharing. If we elect to opt out of profit and loss sharing, we will instead receive sales milestones and royalties, and our revenue, if any, from PRX002 will be reduced. Moreover, under the terms of the License Agreement, we rely on Roche to provide us estimates of their costs, revenue and revenue adjustments and royalties, which estimates we use in preparing our quarterly and annual financial reports. If the underlying assumptions on which Roche's estimates were based prove to be incorrect, actual results or revised estimates supplied by Roche that are materially different from the original estimates could require us to adjust the estimates included in our reported financial results. If material, these adjustments could require us to restate previously reported financial results, which could have a negative effect on our stock price.

Our ability to receive any significant revenue from PRX002 will be dependent on Roche's efforts and our participation in profit and loss sharing, and may result in lower levels of income than if we marketed or developed our product candidates entirely on our own. Roche may not fulfill its obligations or carry out marketing activities for PRX002 as diligently as we would like. We could also become involved in disputes with Roche, which could lead to delays in or termination of commercialization programs and time-consuming and expensive litigation or arbitration. If Roche terminates or breaches the License Agreement, or otherwise decides not to complete its obligations in a timely manner, the chances of successfully developing or marketing PRX002 would be materially and adversely affected. Outside of the United States, we are solely dependent on the efforts and commitments of Roche, either directly or through third parties, to further commercialize PRX002. If Roche's efforts are unsuccessful, our ability to generate future product sales from PRX002 outside the United States would be significantly reduced.

Under our License Agreement, outside of the United States, Roche has responsibility for developing and commercializing PRX002 and any future Licensed Products targeting alpha-synuclein. As a consequence, any progress and commercial success outside of the United States is dependent solely on Roche's efforts and commitment to the program. For example, Roche may delay, reduce or terminate development efforts relating to PRX002 outside of the United States, or under some circumstances independently develop products that compete with PRX002, or decide not to commit sufficient resources to the marketing and distribution of PRX002.



In the event that Roche does not diligently commercialize PRX002, the License Agreement provides us the right to terminate the License Agreement in connection with a material breach uncured for 90 days after notice thereof. However, our ability to enforce the provisions of the License Agreement so as to obtain meaningful recourse within a reasonable timeframe is uncertain. Further, any decision to pursue available remedies including termination would impact the potential success of PRX002, including inside the United States, and we may choose not to terminate as we may not be able to find another partner and any new collaboration likely will not provide comparable financial terms to those in our arrangement with Roche. In the event of our termination, this may require us to commercialize PRX002 on our own, which is likely to result in significant additional expense and delay. Significant changes in Roche's business strategy, resource commitment and the willingness or ability of Roche to complete its obligations under our arrangement could materially affect the potential success of the product. Furthermore, if Roche does not successfully develop and commercialize PRX002 outside of the United States, our potential to generate future revenue outside of the United States would be significantly reduced.

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

We do not currently have an organization for the sales, marketing and distribution of pharmaceutical products. In order to market any products that may be approved by the FDA, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. We have entered into the License Agreement with Roche for the development of PRX002 and may develop our own sales force and marketing infrastructure to co-promote PRX002 in the United States for the treatment of Parkinson's disease and any future Licensed Products approved for Parkinson's disease in the United States. If we exercise our co-promotion option and are unable to develop our own sales force and marketing infrastructure to effectively commercialize PRX002 or other Licensed Products, our ability to generate additional revenue from potential sales of PRX002 or such products in the United States may be harmed. In addition, our right to co-promote PRX002 and other Licensed Products will terminate if we commence a Phase 3 study for a competitive product that treats Parkinson's disease. For our other approved products, 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. If government and third-party payors fail to provide coverage and adequate reimbursement rates for any of our drug candidates that receive regulatory approval, our revenue and prospects for profitability will be harmed.

In both domestic and foreign markets, our sales of any future products will depend in part upon the availability of reimbursement from third-party payors. Such third-party payors include government health programs such as Medicare, managed care providers, private health insurers, and other organizations. There is significant uncertainty related to the third-party coverage and reimbursement of newly approved drugs. Coverage and reimbursement may not be available for any drug that we or our collaborators commercialize and, even if these are available, the level of reimbursement may not be satisfactory. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Third-party payors are also increasingly attempting to contain healthcare costs by demanding price discounts or rebates limiting both coverage and the amounts that they will pay for new drugs, and, as a result, they may not cover or provide adequate payment for our drug candidates. We might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payors' satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Our future products might not ultimately be considered cost-effective. Adequate third-party reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on investment in product development. If coverage and adequate reimbursement are not available or reimbursement is available only to limited levels, we or our collaborators may not be able to successfully commercialize any product candidates for which marketing approval is obtained.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drugs vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to

continuing governmental control even after initial approval is granted. As a result, we or our collaborators might obtain marketing approval for a drug in a particular country, but then be subject to price regulations that delay commercial launch of the drug, possibly for lengthy time periods, and negatively impact our ability to generate revenue from the sale of the drug in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more drug candidates, even if our drug candidates obtain marketing approval.

U.S. and foreign governments continue to propose and pass legislation designed to reduce the cost of healthcare. In the United States, we expect that there will continue to be federal and state proposals to implement similar governmental controls. In addition, recent changes in the Medicare program and increasing emphasis on managed care in the United States will continue to put pressure on pharmaceutical product pricing. For example, in 2010, the Patient Protection and Affordable Care Act, as amended

by the Health Care and Education Reconciliation Act, collectively, the Healthcare Reform Law, was enacted. The Healthcare Reform Law substantially changes the way healthcare is financed by both governmental and private insurers and significantly affects the pharmaceutical industry. Among the provisions of the Healthcare Reform Law of importance to the pharmaceutical industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers and enhanced penalties for non-compliance;
- a new Medicare Part D coverage gap discount program, under which manufacturers must agree to offer 50 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- a licensure framework for follow-on biologic products;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements under the federal Open Payments program and its implementing regulations;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since the Healthcare Reform Law was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect on April 1, 2013 and will stay in effect through 2024 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our drugs, if approved, and, accordingly, our financial operations.

We expect that the Healthcare Reform Law, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved drug. Legislation and regulations affecting the pricing of pharmaceuticals might change before our drug candidates are approved for marketing. Any reduction in reimbursement from Medicare or other government healthcare programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our drugs.

There can be no assurance that our drug candidates, if they are approved for sale in the United States or in other countries, will be considered medically reasonable and necessary for a specific indication, that they will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available, or that third-party payors' reimbursement policies will not adversely affect our ability to sell our drug candidates profitably if they are approved for sale.

The markets for our drug candidates are subject to intense competition. If we are unable to compete effectively, our drug candidates may be rendered noncompetitive or obsolete.

The research, development and commercialization of new drugs is highly competitive. We will face competition with respect to all drug candidates we may develop or commercialize in the future from pharmaceutical and biotechnology companies

39

---

worldwide. The key factors affecting the success of any approved product will be its indication, label, efficacy, safety profile, drug interactions, method of administration, pricing, coverage, reimbursement and level of promotional activity relative to those of competing drugs.

Furthermore, many large pharmaceutical and biotechnology companies, academic institutions, governmental agencies and other public and private research organizations are pursuing the development of novel drugs that target the same indications we are targeting with our research and development program. We face, and expect to continue to face, intense and increasing competition as new products enter the market and advanced technologies become available.

Many of our competitors have:

- significantly greater financial, technical and human resources than we have and may be better equipped to discover, develop, manufacture and commercialize drug candidates;
- more extensive experience in preclinical testing and clinical trials, obtaining regulatory approvals and manufacturing and marketing pharmaceutical products;
- drug candidates that have been approved or are in late-stage clinical development; and/or
- collaborative arrangements in our target markets with leading companies and research institutions

Competitive products may render our research and development program obsolete or noncompetitive before we can recover the expenses of developing and commercializing our drug candidates. Furthermore, the development of new treatment methods and/or the widespread adoption or increased utilization of any vaccine or development of other products or treatments for the diseases we are targeting could render any of our drug candidates noncompetitive, obsolete or uneconomical. If we successfully develop and obtain approval for a drug candidate, we will face competition based on the safety and effectiveness of the approved product, the timing of its entry into the market in relation to competitive products in development, the availability and cost of supply, marketing and sales capabilities, coverage, reimbursement, price, patent position and other factors. Even if we successfully develop drug candidates but those drug candidates do not achieve and maintain market acceptance, our business will not be successful.

Our drug candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

Our drug candidates are regulated by the FDA as biologic products and we intend to seek approval for these products pursuant to the BLA pathway. The Biologics Price Competition and Innovation Act of 2009, or BPCIA, created an abbreviated pathway for the approval of biosimilar and interchangeable biologic products. The abbreviated regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as “interchangeable” based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biologic products.

We believe that any of our drug candidates approved as a biologic product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our drug candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biologic products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

We may be subject, directly or indirectly, to federal and state anti-kickback, fraud and abuse, false claims, physician payment transparency, health information privacy and security, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

If we obtain FDA approval for any of our drug candidates and begin commercializing those products in the United States, our operations may be directly, or indirectly through our customers, subject to various federal and state fraud

and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, which may constrain the business or financial arrangements and relationships through which we sell, market and distribute any drugs for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and patient privacy regulation by both the federal government and the states and foreign jurisdictions in which we conduct our business. The laws that may affect our ability to operate include:

40

---

the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;

federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;

the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that impose criminal and civil liability for executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;

the federal Physician Payment Sunshine Act, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to "payments or other transfers of value" made to physicians, which is defined to include doctors, dentists, optometrists, podiatrists and chiropractors, and teaching hospitals and applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by the physicians and their immediate family members. The period between August 1, 2013 and December 31, 2013 was the first reporting period, and manufacturers were required to report aggregate payment data by March 31, 2014, and will be required to report detailed payment data and submit legal attestation to the accuracy of such data during Phase 2 of the program (which begins in May 2014 and extends for at least 30 days). Thereafter, manufacturers must submit reports by the 90th day of each subsequent calendar year. CMS will commence disclosure of such information on a publicly available website by September 2014;

HIPAA, as amended by the Health Information Technology and Clinical Health Act, and its implementing regulations, which impose obligations on covered healthcare providers, health plans, and healthcare clearinghouses, as well as their business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information; and

analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Further, the Healthcare Reform Law, among other things, amended the intent requirements of the federal Anti-Kickback Statute and the criminal statutes governing healthcare fraud. A person or entity can now be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, the Healthcare Reform Law provided that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to significant civil, criminal, and

administrative penalties, including, without limitation, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, imprisonment, damages, fines and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business, including our collaborators, is found not to be in compliance with applicable laws, it may be subject to criminal,



civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also adversely affect our business.

If a successful product liability or clinical trial claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, we could incur substantial liability.

The use of our drug candidates in clinical trials and the sale of any products for which we obtain marketing approval will expose us to the risk of product liability and clinical trial liability claims. Product liability claims might be brought against us by consumers, health care providers or others selling or otherwise coming into contact with our products. Clinical trial liability claims may be filed against us for damages suffered by clinical trial subjects or their families. If we cannot successfully defend ourselves against product liability claims, we could incur substantial liabilities. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- decreased demand for any approved drug candidates;
- impairment of our business reputation;
- withdrawal of clinical trial participants;
- costs of related litigation;
- distraction of management's attention;
- substantial monetary awards to patients or other claimants;
- loss of revenues; and the inability to successfully commercialize any approved drug candidates.

We currently have clinical trial liability insurance coverage in the aggregate amount of \$15.0 million annual coverage limit for our clinical trials, of which at least \$5.0 million annual coverage limit is designated for our ongoing Phase 1 clinical trial of NEOD001. However, our insurance coverage may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If and when we obtain marketing approval for any of our drug candidates, we intend to expand our insurance coverage to include the sale of commercial products; however, we may be unable to obtain this product liability insurance on commercially reasonable terms. 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 series of claims brought against us could cause our share price to decline and, if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

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

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

We do not have the ability to independently conduct clinical trials for our drug candidates, and we rely on third parties, such as consultants, contract research organizations, medical institutions, and clinical investigators, to perform this function. Our reliance on these third parties for clinical development activities results in reduced control over these activities. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. Although we have and will enter into agreements with these third parties, we will be responsible for confirming that our clinical trials are conducted in accordance with their general investigational plans and protocols. Moreover, the FDA requires us to comply with regulations and standards, commonly referred to as cGCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities and requirements. If we or any of our third party contractors fail to comply with applicable cGCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with cGCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

To date, we believe our consultants, contract research organizations and other similar entities with which we are working have performed well; however, if these third parties do not successfully carry out their contractual duties,

meet expected deadlines,

42

---

or comply with applicable regulations, we may be required to replace them. Although we believe that there are a number of other third-party contractors we could engage to continue these activities, we may not be able to enter into arrangements with alternative third-party contractors or to do so on commercially reasonable terms, which may result in a delay of our planned clinical trials. Accordingly, we may be delayed in obtaining regulatory approvals for our drug candidates and may be delayed in our efforts to successfully develop our drug candidates.

In addition, our third-party contractors are not our employees, and except for remedies available to us under our agreements with such third-party contractors, we cannot control whether or not they devote sufficient time and resources to our ongoing clinical, nonclinical and preclinical programs. If third-party contractors do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our drug candidates. As a result, our results of operations and the commercial prospects for our drug candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

If we do not establish additional strategic collaborations, we may have to alter our research and development plans. Our drug research and development programs and potential commercialization of our drug candidates will require substantial additional cash to fund expenses. Our strategy includes potentially collaborating with additional leading pharmaceutical and biotechnology companies to assist us in furthering development and potential commercialization of some of our drug candidates, in some or all geographies. It may be difficult to enter into one or more of such collaborations in the future. We face significant competition in seeking appropriate collaborators and these collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on acceptable terms, or at all, in which case we may have to curtail the development of a particular drug candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we will need to obtain additional capital, which may not be available to us on acceptable terms, or at all. If we do not have sufficient funds, we will not be able to bring our drug candidates to market and generate product revenue.

We have no manufacturing capacity and depend on a third-party manufacturer to produce our pre-clinical and clinical trial drug supplies.

We do not currently operate manufacturing facilities for pre-clinical or clinical production of any of our drug candidates. We have limited experience in drug manufacturing, and we lack the resources and the capabilities to manufacture any of our drug candidates on a clinical or commercial scale. As a result, we rely on a single third-party manufacturer to supply, store, and distribute pre-clinical and clinical supply of our drug candidates, and plan to continue to do so until we increase the number of manufacturers with whom we contract. Any performance failure on the part of our existing or future manufacturers could delay clinical development or regulatory approval of our drug candidates or commercialization of any approved products, producing additional losses and depriving us of potential product revenue.

Our drug candidates require precise, high quality manufacturing. Failure by our contract manufacturer to achieve and maintain high manufacturing standards could result in patient injury or death, product recalls or withdrawals, delays or failures in testing or delivery, cost overruns, or other problems that could seriously hurt our business. Contract manufacturers may encounter difficulties involving production yields, quality control, and quality assurance. These manufacturers are subject to ongoing periodic and unannounced inspections by the FDA and corresponding state and foreign agencies to ensure strict compliance with cGMPs and other applicable government regulations and corresponding foreign standards; however, we do not have control over third-party manufacturers' compliance with these regulations and standards.

If a contract manufacturer cannot perform as agreed, we may be required to replace it. Although we believe there are a number of potential replacements as our manufacturing processes are not manufacturer specific, we may incur added costs and delays in identifying and qualifying any such replacements because the FDA must approve any replacement

manufacturer prior to manufacturing our drug candidates. Such approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our drug candidates after receipt of FDA approval.

We anticipate continued reliance on third-party manufacturers if we are successful in obtaining marketing approval from the FDA and other regulatory agencies for any of our drug candidates, and our commercialization of any of our drug candidates may be halted, delayed or made less profitable if those third parties fail to obtain such approvals, fail to provide us with sufficient quantities of drug product or fail to do so at acceptable quality levels or prices.

To date, our drug candidates have been manufactured in small quantities for preclinical and clinical testing by third-party manufacturers. If the FDA or other regulatory agencies approve any of our drug candidates for commercial sale, we expect that we would continue to rely, at least initially, on third-party manufacturers to produce commercial quantities of approved drug candidates. These manufacturers may not be able to successfully increase the manufacturing capacity for any approved drug candidates in a timely or economic manner, or at all. Significant scale-up of manufacturing may require additional validation studies, which the FDA must review and approve. If third party manufacturers are unable to successfully increase the manufacturing capacity for a drug candidate, or we are unable to establish our own manufacturing capabilities, the commercial launch of any approved products may be delayed or there may be a shortage in supply, which in turn could have a material adverse effect on our business. In addition, the facilities used by our contract manufacturers to manufacture our drug candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit a BLA to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with cGMPs, for manufacture of both active drug substances and finished drug products. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or other regulatory authorities, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our drug candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our drug candidates, if approved.

We depend on third-party suppliers for key raw materials used in our manufacturing processes, and the loss of these third-party suppliers or their inability to supply us with adequate raw materials could harm our business.

We rely on third-party suppliers for the raw materials required for the production of our drug candidates. Our dependence on these third-party suppliers and the challenges we may face in obtaining adequate supplies of raw materials involve several risks, including limited control over pricing, availability, quality and delivery schedules. We cannot be certain that our suppliers will continue to provide us with the quantities of these raw materials that we require or satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or sole sourced raw materials could materially harm our ability to manufacture our products until a new source of supply, if any, could be identified and qualified. Although we believe there are currently several other suppliers of these raw materials, we may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and potential commercialization of our drug candidates, including limiting supplies necessary for clinical trials and regulatory approvals, which would have a material adverse effect on our business.

#### Risks Related to Our Intellectual Property

If we are unable to adequately protect or enforce the intellectual property relating to our drug candidates our ability to successfully commercialize our drug candidates will be harmed.

Our success depends in part on our ability to obtain patent protection both in the United States and in other countries for our drug candidates. Our ability to protect our drug candidates from unauthorized or infringing use by third parties depends in substantial part on our ability to obtain and maintain valid and enforceable patents. Due to evolving legal standards relating to the patentability, validity and enforceability of patents covering pharmaceutical inventions and the scope of claims made under these patents, our ability to obtain, maintain and enforce patents is uncertain and involves complex legal and factual questions. Accordingly, rights under any issued patents may not provide us with sufficient protection for our drug candidates or provide sufficient protection to afford us a commercial advantage against competitive products or processes.

In addition, we cannot guarantee that any patents will issue from any pending or future patent applications owned by or licensed to us or our affiliates. Even if patents have issued or will issue, we cannot guarantee that the claims of these patents are or will be valid or enforceable or will provide us with any significant protection against competitive products or otherwise be commercially valuable to us. Patent applications in the United States are maintained in confidence for up to 18 months after their filing. In some cases, however, patent applications remain confidential in the U.S. Patent and Trademark Office, or the USPTO, for the entire time prior to issuance as a U.S. patent. Similarly,

publication of discoveries in the scientific or patent literature often lags behind actual discoveries. Consequently, we cannot be certain that we or our licensors or co-owners were the first to invent, or the first to file patent applications on, our drug candidates or their use as drugs. In the event that a third party has also filed a U.S. patent application relating to our drug candidates or a similar invention, we may have to participate in interference or derivation proceedings declared by the USPTO to determine priority of invention in the United States. The costs of these proceedings could be substantial and it is possible that our efforts would be unsuccessful, resulting in a loss of our U.S. patent position. Furthermore, we may not have identified all U.S. and foreign patents or published applications that affect our business either by blocking our

ability to commercialize our drugs or by covering similar technologies. Composition-of-matter patents on the biological or chemical active pharmaceutical ingredient are generally considered to be the strongest form of intellectual property protection for pharmaceutical products, as such patents provide protection without regard to any method of use. We cannot be certain that the claims in our patent applications covering composition-of-matter of our product candidates will be considered patentable by the USPTO and courts in the United States or by the patent offices and courts in foreign countries, nor can we be certain that the claims in our issued composition-of-matter patents will not be found invalid or unenforceable if challenged. Method-of-use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products “off-label.” Although off-label prescriptions may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to prevent or prosecute.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, may affect patent litigation, and switch the U.S. patent system from a “first-to-invent” system to a “first-to-file” system. Under a “first-to-file” system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor had made the invention earlier. The U.S. Patent and Trademark Office recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first-to-file provisions, only became effective on March 16, 2013.

Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

We may be subject to a third-party preissuance submission of prior art to the U.S. Patent and Trademark Office, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review, or other patent office proceedings or litigation, in the United States or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third party patent rights.

We may not be able to protect our intellectual property rights throughout the world.

The laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as in the United States and many companies have encountered significant difficulties in protecting and defending such rights in foreign jurisdictions. If we encounter such difficulties in protecting or are otherwise precluded from effectively protecting our intellectual property rights in foreign jurisdictions, our business prospects could be substantially harmed.

We license patent rights from third-party owners. Such licenses may be subject to early termination if we fail to comply with our obligations in our licenses with third parties, which could result in the loss of rights or technology that are material to our business.

We are a party to licenses that give us rights to third-party intellectual property that is necessary or useful for our business, and we may enter into additional licenses in the future. Under these license agreements we are obligated to pay the licensor fees, which may include annual license fees, milestone payments, royalties, a percentage of revenues associated with the licensed technology and a percentage of sublicensing revenue. In addition, under certain of such agreements, we are required to diligently pursue the development of products using the licensed technology. If we fail to comply with these obligations and fail to cure our breach within a specified period of time, the licensor may have the right to terminate the applicable license, in which event we could lose valuable rights and technology that are material to our business.

If the licensor retains control of prosecution of the patents and patent applications licensed to us, we may have limited or no control over the manner in which the licensor chooses to prosecute or maintain its patents and patent applications and have limited or no right to continue to prosecute any patents or patent applications that the licensor elects to abandon.

Litigation regarding patents, patent applications and other proprietary rights may be expensive and time consuming. If we are involved in such litigation, it could cause delays in bringing drug candidates to market and harm our ability to operate.



Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Although we are not currently aware of any litigation or other proceedings or third-party claims of intellectual property infringement related to our drug candidates, the pharmaceutical industry is characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may hold or obtain patents in the future and allege that the use of our technologies infringes these patent claims or that we are employing their proprietary technology without authorization.

In addition, third parties may challenge or infringe upon our existing or future patents. Proceedings involving our patents or patent applications or those of others could result in adverse decisions regarding:

- the patentability of our inventions relating to our drug candidates; and/or
- the enforceability, validity or scope of protection offered by our patents relating to our drug candidates.

Even if we are successful in these proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us.

If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid, we may:

- incur substantial monetary damages;
- encounter significant delays in bringing our drug candidates to market; and/or
- be precluded from participating in the manufacture, use or sale of our drug candidates or methods of treatment requiring licenses.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition by potential partners or customers in our markets of interest. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected.

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

We rely on trade secrets to protect our proprietary technologies, especially where we do not believe patent protection is appropriate or obtainable; however, trade secrets are difficult to protect. We rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers, and other advisors to protect our trade secrets and other proprietary information. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover our trade secrets and proprietary information. Costly and time consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

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

#### Risks Related to Our Ordinary Shares

The market price of our shares may fluctuate widely.

Our ordinary shares commenced trading on The NASDAQ Global Market on December 21, 2012 and currently trade on The NASDAQ Global Select Market. We cannot predict the prices at which our ordinary shares may trade at. The market price of our ordinary shares may fluctuate widely, depending upon many factors, some of which may be beyond our control, including:

- our ability to obtain financing as needed;
- progress in and results from our ongoing or future clinical trials;
- our collaboration with Roche pursuant to the License Agreement to develop and commercialize PRX002, as well as any future Licensed Products targeting alpha-synuclein;
- failure or delays in advancing our preclinical drug candidates or other drug candidates we may develop in the future, into clinical trials;
- results of clinical trials conducted by others on drugs that would compete with our drug candidates;
  - issues in manufacturing our drug candidates;
- regulatory developments or enforcement in the United States and foreign countries;
- developments or disputes concerning patents or other proprietary rights;
- introduction of technological innovations or new commercial products by our competitors;
- changes in estimates or recommendations by securities analysts, if any, who cover our company;
- public concern over our drug candidates;
- litigation;
- future sales of our ordinary shares;
- general market conditions;
- changes in the structure of healthcare payment systems;
- failure of any of our drug candidates, if approved, to achieve commercial success;
- economic and other external factors or other disasters or crises;
- period-to-period fluctuations in our financial results;
- overall fluctuations in U.S. equity markets;
- our quarterly or annual results, or those of other companies in our industry;
- announcements by us or our competitors of significant acquisitions or dispositions;
- the operating and share price performance of other comparable companies;

- investor perception of our company and the drug development industry;
- natural or environmental disasters that investors believe may affect us; or
- fluctuations in the budget of federal, state and local governmental entities around the world.

These and other external factors may cause the market price and demand for our ordinary shares to fluctuate substantially, which may limit or prevent investors from readily selling their ordinary shares and may otherwise negatively affect the liquidity of our ordinary shares. In particular, stock markets in general have experienced volatility that has often been unrelated to the operating performance of a particular company. These broad market fluctuations may adversely affect the trading price of our ordinary shares. In the past, when the market price of a stock has been volatile, some holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management.

Your percentage ownership in Prothena may be diluted in the future.

As with any publicly traded company, your percentage ownership in us may be diluted in the future because of equity issuances for acquisitions, capital raising transactions or otherwise. We may need to raise additional capital in the future. If we are able to raise additional capital, we may issue equity or convertible debt instruments, which may severely dilute your ownership interest in us. In addition, we intend to continue to grant option awards to our directors, officers and employees, which would dilute your ownership stake in us. In March 2014, our Board approved an increase of 2.9 million additional ordinary shares authorized for issuance under our 2012 Long term Incentive Plan, subject to shareholder approval. As of April 30, 2014, the number of ordinary shares available for issuance pursuant to outstanding and future equity awards under our equity plan is 137,500.

If we are unable to maintain effective internal controls, our business could be adversely affected.

We are subject to the reporting and other obligations under the Securities Exchange Act of 1934, as amended, or the Exchange Act, including the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which require annual management assessments of the effectiveness of our internal control over financial reporting. However, our auditors will not be required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 until we are no longer an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, if we continue to take advantage of the exemptions available to us through the JOBS Act. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation to meet the detailed standards under the rules. During the course of its testing, our management may identify material weaknesses or deficiencies which may not be remedied in time to meet the deadline imposed by the Sarbanes-Oxley Act of 2002. These reporting and other obligations place significant demands on our management and administrative and operational resources, including accounting resources.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Financial Statements for external purposes in accordance with accounting principles generally accepted in the United States. Any failure to maintain effective internal controls could have an adverse effect on our business, financial position and results of operations.

For as long as we are an emerging growth company, we will be exempt from certain reporting requirements, including those relating to accounting standards and disclosure about our executive compensation, that apply to other public companies.

In April 2012, President Obama signed into law the JOBS Act. The JOBS Act contains provisions that, among other things, relax certain reporting requirements for emerging growth companies, including certain requirements relating to accounting standards and compensation disclosure. We are classified as an emerging growth company, which is defined as a company with annual gross revenues of less than \$1 billion, that has been a public reporting company for a period of less than five years, and that does not have a public float of \$700 million or more in securities held by non-affiliated holders. We will remain an emerging growth company until the earliest of (i) the end of the fiscal year in which the market value of our ordinary shares that are held by non-affiliates exceeds \$700 million as of the end of

the second fiscal quarter, (ii) the end of the fiscal year in which we have total annual gross revenues of \$1 billion or more during such fiscal year, (iii) the date on which we issue more than \$1 billion in non-convertible debt in a three-year period or (iv) the end of the fiscal year following the fifth anniversary of the date of the first sale of our ordinary shares pursuant to an effective registration statement filed under the Securities Act of 1933, as amended, or the Securities Act.

For as long as we are an emerging growth company, unlike other public companies, we are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies.” These include, but are not limited to, (i) reduced obligations with respect to the disclosure of selected financial data in registration statements filed with the Securities and Exchange Commission, (ii) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, (iii) an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, and (iv) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and the requirement to obtain shareholder approval of any golden parachute payments not previously approved. As noted above, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards that have different effective dates for public and private companies until such time as those standards apply to private companies. We intend to take advantage of such extended transition period. Since we would then not be required to comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies, our Consolidated Financial Statements may not be comparable to the financial statements of companies that comply with public company effective dates. If we were to elect to comply with these public company effective dates, such election would be irrevocable pursuant to Section 107 of the JOBS Act.

If we were treated as a passive foreign investment company for U.S. federal income tax purposes, it could result in adverse U.S. federal income tax consequences to U.S. holders of our ordinary shares.

Based on the current market price of our ordinary shares and the value and composition of our assets, we do not believe we were a PFIC for U.S. federal income tax purposes for our taxable year ended December 31, 2013. In addition, we do not expect to be a PFIC for U.S. federal income tax purposes for our current taxable year ending on December 31, 2014 or any future taxable year. However, the application of the PFIC rules is subject to uncertainty in several respects, and we cannot assure you the U.S. Internal Revenue Service, or IRS, will not take a contrary position. A non-U.S. corporation will be considered a PFIC for any taxable year if either (1) at least 75% of its gross income for such year is passive income or (2) at least 50% of the value of its assets (based on an average of the quarterly values of the assets during such year) is attributable to assets that produce or are held for the production of passive income (the “asset test”). In general, the total value of our assets for purposes of the asset test will be determined based on the market price of our ordinary shares. As a result, fluctuations in the market price of our ordinary shares may cause us to become a PFIC. In addition, changes in the composition of our income or assets may cause us to become a PFIC. A separate determination must be made each taxable year as to whether we are a PFIC (after the close of each taxable year). If we are a PFIC for our current taxable year, certain adverse U.S. federal income tax consequences could apply to U.S. persons who acquire our ordinary shares with respect to any “excess distribution” received from us and any gain from a sale or other disposition of our ordinary shares.

Irish law differs from the laws in effect in the United States and may afford less protection to holders of our ordinary shares.

It may not be possible to enforce court judgments obtained in the United States against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the United States currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish incorporated company, we are governed by the Irish Companies Acts 1963-2013, which differ in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our ordinary shares

may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in a jurisdiction of the United States.

Irish law differs from the laws in effect in the United States with respect to defending unwanted takeover proposals and may give our board of directors less ability to control negotiations with hostile offerors.

We are subject to the Irish Takeover Panel Act, 1997, Takeover Rules, 2013, or the Irish Takeover Rules. Under the Irish Takeover Rules, our Board is not permitted to take any action that might frustrate an offer for our shares once our Board has

received an approach that may lead to an offer or has reason to believe that such an offer is or may be imminent, subject to certain exceptions. Potentially frustrating actions such as (i) the issue of shares, options or convertible securities, (ii) material acquisitions or disposals, (iii) entering into contracts other than in the ordinary course of business or (iv) any action, other than seeking alternative offers, which may result in frustration of an offer, are prohibited during the course of an offer or at any earlier time during which our Board has reason to believe an offer is or may be imminent. These provisions may give our Board less ability to control negotiations with hostile offerors and protect the interests of holders of ordinary shares than would be the case for a corporation incorporated in a jurisdiction of the United States.

Transfers of our ordinary shares may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in DTC should not be subject to Irish stamp duty. However, if a shareholder holds our ordinary shares directly rather than beneficially through DTC any transfer of those shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of your shares.

We do not anticipate paying cash dividends, and accordingly, shareholders must rely on share appreciation for any return on their investment.

We anticipate losing money for the foreseeable future and, even if we do ever turn a profit, we intend to retain future earnings, if any, for the development, operation and expansion of our business. Thus, we do not anticipate declaring or paying any cash dividends for the foreseeable future. Therefore, the success of an investment in our ordinary shares will depend upon appreciation in their value and in order to receive any income or realize a return on your investment, you will need to sell your Prothena ordinary shares. There can be no assurance that our ordinary shares will maintain their price or appreciate in value.

Dividends paid by us may be subject to Irish dividend withholding tax.

Although we do not currently anticipate paying cash dividends, if we were to do so in the future, a dividend withholding tax (currently at a rate of 20%) may arise. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and shareholders resident in other countries that have entered into a double taxation treaty with Ireland may be entitled to exemptions from dividend withholding tax subject to the completion of certain dividend withholding tax declaration forms.

Shareholders entitled to an exemption from Irish dividend withholding tax on any dividends received from us will not be subject to Irish income tax in respect of those dividends, unless they have some connection with Ireland other than their shareholding (for example, they are resident in Ireland). Shareholders who receive dividends subject to Irish dividend withholding tax will generally have no further liability to Irish income tax on those dividends.

Prothena shares, received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. At the date hereof, children have a tax-free threshold of €225,000 in respect of taxable gifts or inheritances received from their parents. It is recommended that each shareholder consult his or her own tax advisor as to the tax consequences of holding our shares or receiving dividends from us.

## ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

## ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

51

---



ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

See the Exhibit Index following the signature page to this Quarterly Report on Form 10-Q for a list of exhibits filed or furnished with this report, which Exhibit Index is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: May 5, 2014

Prothena Corporation plc  
(Registrant)

/s/ Dale B. Schenk  
Dale B. Schenk  
President and Chief Executive Officer

/s/ Tran B. Nguyen  
Tran B. Nguyen  
Chief Financial Officer

## EXHIBIT INDEX

Exhibit No.	Description	Previously Filed			Exhibit	Filed Herewith
		Form	File No.	Filing Date		
10.1#	Tara Nickerson Promotion Letter	8-K	001-35676	3/3/2014	10.1	
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS+	XBRL Instance Document					X
101.SCH+	XBRL Taxonomy Extension Schema Document					X
101.CAL+	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF+	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB+	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE+	XBRL Taxonomy Extension Presentation Linkbase Document					X

Exhibit 32.1 is being furnished and shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liability of that section, nor shall such exhibit be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as otherwise specifically stated in such filing.

#Indicates management contract or compensatory plan or arrangement.

+XBRL information is furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934, and is not subject to liability under those sections, is not part of any registration statement or prospectus to which it relates and is not incorporated or deemed to be incorporated by

reference into any registration statement, prospectus or other document.