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 September 30, 2023

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 incorporation or organization)	**(I.R.S. Employer Identification Number)**

77 Sir John Rogerson's Quay, Block C
Grand Canal Docklands
Dublin 2, D02 VK60, Ireland

(Address of principal executive offices including Zip Code)

Registrant's telephone number, including area code: 011-353-1-236-2500

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Ordinary Shares, par value $0.01 per share	**PRTA**	**The Nasdaq Global Select Market**

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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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 was 53,665,349 as of October 26, 2023.

PROTHENA CORPORATION PLC
Form 10-Q – QUARTERLY REPORT
For the Quarter Ended September 30, 2023

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Note Regarding Forward-Looking Statements

In addition to historical information, this Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may include words such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. In addition, any statements that refer to expectations, projections, or other characterizations of future events or circumstances are forward-looking statements.

These forward-looking statements, which reflect our beliefs, assumptions, expectations, estimates, forecasts, and projections about our business and the industry in which we operated as of the date hereof, are estimates based on our best judgment. These statements relate to, among other things, our goal to continue building a biology-directed engine targeting protein dysregulation; the treatment potential, designs, proposed mechanisms of action, and potential administration of our drug candidates; plans for future clinical trials of our drug candidates; our potential to advance, initiate, and complete investigational new drug (“IND”) enabling studies for our discovery and preclinical programs; our collaborations with F. Hoffman-La Roche Ltd and Hoffmann-La Roche Inc. (together “Roche”), Bristol Myers Squibb Company (“BMS”), and Novo Nordisk, and amounts we may receive under such collaborations; the sufficiency of our cash position to fund advancement of a broad pipeline; and our anticipated need for additional capital.

These forward-looking statements are not guarantees of future performance or development and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this Quarterly Report on Form 10-Q may turn out to be inaccurate. Factors that could cause our actual results to differ materially include, but are not limited to, the risks and uncertainties set forth below, those discussed under Part II Item 1A “Risk Factors” of this Quarterly Report on Form 10-Q, and in our other filings with the U.S. Securities and Exchange Commission.

Except as required by law or by the rules and regulations of the U.S. Securities and Exchange Commission, 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 Quarterly Report on Form 10-Q, including without limitation:

- our ability to obtain additional financing in future offerings and/or obtain funding from future collaborations;
- our operating losses;
- our ability to successfully complete research and development of our drug candidates;
- our ability to develop, manufacture and commercialize products;
- our collaborations and other agreements with third parties, including Roche, BMS, and Novo Nordisk;
- our ability to protect our patents and other intellectual property;
- our ability to hire and retain key employees;
- 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;
- the timing, receipt, and amount of any capital investments, cost-sharing contributions or reimbursements, milestone payments, or royalties that we might receive under current or potential future collaborations, including any milestone payments pursuant to our agreement with Novo Nordisk;
- potential disruptions in the U.S. and global capital and credit markets;
- government regulation of our industry;
- the volatility of the market price of our ordinary shares;
- the outbreak of the novel strain of coronavirus SARS-CoV-2 and the emergence of variant strains;
- the Russian invasion of Ukraine; and
- business disruptions.

Summary of Risks Affecting Our Business

Our business is subject to numerous risks and uncertainties. The following summary highlights some of the risks you should consider with respect to our business and prospects. These risks are described more fully in Part II Item 1A “Risk Factors” of this Quarterly Report on Form 10-Q which includes a more complete discussion of the risks summarized below as well as a discussion of other risks related to our business, our prospects, and your investment.

- We anticipate that we will incur losses for the foreseeable future and we may never 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.
- Our success is largely dependent on the success of our research and development programs; our drug candidates are in various stages of development and we may not be able to successfully discover, develop, obtain regulatory approval for, or commercialize any drug candidates.
- We have entered into agreements to develop and bring to market drug candidates with Roche, BMS, and Novo Nordisk and may enter into additional agreements in the future, and we might not realize the anticipated benefits of such agreements, including receiving anticipated milestone payments pursuant to these agreements.
- 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.
- The COVID-19 pandemic has adversely affected our business and could have a material adverse effect on our liquidity, results of operations, financial condition, or business, including our nonclinical and clinical development programs.
- 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.
- 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 future success depends on our ability to retain key personnel and to attract, retain, and motivate qualified personnel.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Prothena Corporation plc and Subsidiaries

Condensed Consolidated Balance Sheets (unaudited)
(in thousands, except share and per share data)

	September 30, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 670,897	$ 710,406
Accounts Receivable	5,159	—
Prepaid expenses and other current assets	13,196	8,692
Restricted cash, current	1,352	—
Total current assets	690,604	719,098
Non-current assets:		
Property and equipment, net	2,433	1,731
Operating lease right-of-use assets	12,629	6,277
Deferred tax assets	29,916	18,204
Restricted cash, non-current	860	2,212
Other non-current assets	10,478	10,513
Total non-current assets	56,316	38,937
Total assets	$ 746,920	$ 758,035
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 19,458	$ 9,270
Accrued research and development	18,003	10,794
Deferred revenue, current	316	11,442
Lease liability, current	1,817	6,473
Other current liabilities	13,776	12,168
Total current liabilities	53,370	50,147
Non-current liabilities:		
Deferred revenue, non-current	67,405	85,293
Lease liability, non-current	8,918	—
Other liabilities	—	553
Total non-current liabilities	76,323	85,846
Total liabilities	129,693	135,993
Commitments and contingencies (Note 6)		
Shareholders' equity:		
Euro deferred shares, €22 nominal value:	—	—
Authorized shares — 10,000 at September 30, 2023 and December 31, 2022		
Issued and outstanding shares — none at September 30, 2023 and December 31, 2022		
Ordinary shares, $0.01 par value:	536	521
Authorized shares — 100,000,000 at September 30, 2023 and December 31, 2022		
Issued and outstanding shares 53,638,615 and 52,103,608 at September 30, 2023 and December 31, 2022, respectively		
Additional paid-in capital	1,529,246	1,454,524
Accumulated deficit	(912,555)	(833,003)
Total shareholders' equity	617,227	622,042
Total liabilities and shareholders' equity	$ 746,920	$ 758,035

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 September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Collaboration revenue	$ 84,866	$ 1,517	$ 91,004	$ 3,932
Revenue from license and intellectual property	—	—	50	50
Total revenue	84,866	1,517	91,054	3,982
Operating expenses:				
Research and development	57,913	39,860	158,680	98,691
General and administrative	16,645	11,989	44,895	36,776
Total operating expenses	74,558	51,849	203,575	135,467
Income (loss) from operations	10,308	(50,332)	(112,521)	(131,485)
Other income (expense):				
Interest income	8,522	1,913	22,912	2,605
Other income (expense), net	(15)	2	(253)	(70)
Total other income, net	8,507	1,915	22,659	2,535
Income (loss) before income taxes	18,815	(48,417)	(89,862)	(128,950)
Benefit from income taxes	(3,092)	(2,653)	(10,310)	(5,652)
Net income (loss)	$ 21,907	$ (45,764)	$ (79,552)	$ (123,298)
Basic net income (loss) per ordinary share	$ 0.41	$ (0.97)	$ (1.50)	$ (2.63)
Diluted net income (loss) per ordinary share	$ 0.38	$ (0.97)	$ (1.50)	$ (2.63)
Shares used to compute basic net income (loss) per share	53,559	46,986	53,064	46,833
Shares used to compute diluted net income (loss) per share	58,004	46,986	53,064	46,833

See accompanying Notes to Condensed Consolidated Financial Statements.

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

	Nine Months Ended September 30,	
	2023	**2022**
Operating activities		
Net loss	$ (79,552)	$ (123,298)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation	652	548
Share-based compensation	29,834	23,889
Deferred income taxes	(11,712)	(7,903)
Reduction in the carrying amount of right-of-use assets	5,221	4,466
Changes in operating assets and liabilities:		
Accounts receivable	(5,159)	—
Prepaid and other assets	(6,824)	(4,997)
Accounts payable, accruals and other liabilities	18,496	11,826
Deferred revenue	(29,014)	(3,933)
Operating lease liabilities	(4,810)	(4,443)
Net cash used in operating activities	(82,868)	(103,845)
Investing activities		
Purchases of property and equipment	(1,261)	(313)
Net cash used in investing activities	(1,261)	(313)
Financing activities		
Proceeds from issuance of ordinary shares in public offering, net	20,689	—
Proceeds from issuance of ordinary shares in at-the market offering, net	2,959	14,482
Proceeds from issuance of ordinary shares upon exercise of stock options	20,972	6,210
Net cash provided by financing activities	44,620	20,692
Net decrease in cash, cash equivalents and restricted cash	(39,509)	(83,466)
Cash, cash equivalents and restricted cash, beginning of the year	712,618	580,446
Cash, cash equivalents and restricted cash, end of the period	$ 673,109	$ 496,980
Supplemental disclosures of cash flow information		
Cash paid for income taxes	$ 384	$ 2,374
Supplemental disclosures of non-cash investing and financing activities		
Receivable from option exercises	$ —	$ 3,267
Acquisition of property and equipment included in accounts payable and accrued liabilities	$ 93	$ 220
Right-of-use assets obtained in exchange for lease obligations	$ 3,810	$ 151
Reclassification of prepaid lease payments to right-of-use assets upon lease commencement	7,522	—
Receivable from at-the-market offering	$ —	$ 13,744
At-the market offering costs included in accounts payable and accrued liabilities	$ 8	$ 15

See accompanying Notes to Condensed Consolidated Financial Statements.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the statement of financial position that sum to the total of the same such amounts shown in the Condensed Consolidated Statements of Cash Flows.

	Nine Months Ended September 30,	
	2023	2022
Cash and cash equivalents	$ 670,897	$ 495,628
Restricted cash, current	1,352	—
Restricted cash, non-current	860	1,352
Total cash, cash equivalents and restricted cash, end of the period	$ 673,109	$ 496,980

Prothena Corporation plc and Subsidiaries
Condensed Consolidated Statements of Shareholders' Equity
(in thousands, except share data)
(unaudited)

	Nine Months Ended September 30, 2023				
	Ordinary Shares				
	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Equity
Balances at December 31, 2022	**52,103,608**	**$ 521**	**$ 1,454,524**	**$ (833,003)**	**$ 622,042**
Share-based compensation			8,790		8,790
Issuance of ordinary shares upon exercise of stock options	179,474	2	2,538		2,540
Issuance of ordinary shares from the underwriters partial exercise of their 30-day option to purchase additional shares as part of the December 2022 public offering, net of issuance costs of $1.4 million	395,096	$ 4	20,897	—	20,901
Net loss				(46,864)	(46,864)
Balances at March 31, 2023	**52,678,178**	**$ 527**	**$ 1,486,749**	**$ (879,867)**	**$ 607,409**
Share-based compensation			10,100		**10,100**
Issuance of ordinary shares upon exercise of stock options	772,928	8	15,651		15,659
Adjustment related to December 2022 public offering			2		2
Issuance of ordinary shares under the at-the-market offering program, net of issuance costs of $119 thousand	42,361	—	3,104		3,104
Net loss				(54,595)	(54,595)
Balances at June 30, 2023	**53,493,467**	**$ 535**	**$ 1,515,606**	**$ (934,462)**	**$ 581,679**
Share-based compensation			10,944		10,944
Adjustment related to the at-the-market offering program			(14)		(14)
Issuance of ordinary shares upon exercise of stock options	145,148	1	2,710		2,711
Net income				21,907	21,907
Balances at September 30, 2023	**53,638,615**	**$ 536**	**$ 1,529,246**	**$ (912,555)**	**$ 617,227**

	Nine Months Ended September 30, 2022				
	Ordinary Shares		Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount			
Balances at December 31, 2021	**46,660,294**	**$ 466**	**$ 1,181,630**	**$ (716,054)**	**$ 466,042**
Share-based compensation			7,660		7,660
Issuance of ordinary shares upon exercise of stock options	89,472	1	1,474		1,475
Net loss				(36,290)	(36,290)
Balances at March 31, 2022	**46,749,766**	**$ 467**	**$ 1,190,764**	**$ (752,344)**	**$ 438,887**
Share-based compensation			8,263		8,263
Issuance of ordinary shares upon exercise of stock options	34,659	1	426		427
Issuance of ordinary shares under the at-the-market offering program, net of issuance costs of $31 thousand	25,416	—	966		966
Net loss				(41,244)	(41,244)
Balances at June 30, 2022	**46,809,841**	**$ 468**	**$ 1,200,419**	**$ (793,588)**	**$ 407,299**
Share-based compensation			7,966		7,966
Issuance of ordinary shares upon exercise of stock options	587,301	6	7,556		7,562
Issuance of ordinary shares under the at-the-market offering program, net of issuance costs of $899 thousand	488,613	5	27,580		27,585
Net loss				(45,764)	(45,764)
Balances at September 30, 2022	**47,885,755**	**$ 479**	**$ 1,243,521**	**$ (839,352)**	**$ 404,648**

See accompanying Notes to Condensed Consolidated Financial Statements.

Notes to the Condensed Consolidated Financial Statements
(unaudited)

1. Organization

Description of Business

Prothena Corporation plc ("Prothena" or the "Company") is a late-stage clinical biotechnology company with expertise in protein dysregulation and a pipeline of investigational therapeutics with the potential to change the course of devastating neurodegenerative and rare peripheral amyloid diseases.

Fueled by its deep scientific expertise built over decades of research, the Company is advancing a pipeline of therapeutic candidates for a number of indications and novel targets for which its ability to integrate scientific insights around neurological dysfunction and the biology of misfolded proteins can be leveraged. The Company's wholly-owned programs include birtamimab for the potential treatment of AL amyloidosis, and a portfolio of programs for the potential treatment of Alzheimer's disease including PRX012, which targets Amyloid beta (Aβ), and PRX123, a novel dual Aβ-tau vaccine. The Company's partnered programs include prasinezumab, in collaboration with Roche for the potential treatment of Parkinson's disease and other related synucleinopathies, and programs that target tau (BMS-986446/PRX005), TDP-43, and an undisclosed target (PRX019) in collaboration with Bristol Myers Squibb (BMS) for the potential treatment of Alzheimer's disease, amyotrophic lateral sclerosis (ALS), and other neurodegenerative diseases. The Company is also entitled to certain potential milestone payments pursuant to the Company's share purchase agreement with Novo Nordisk pertaining to the Company's ATTR amyloidosis business (including NNC6019, formerly PRX004).

The Company was formed on September 26, 2012, under the laws of Ireland and re-registered as an Irish public limited company on October 25, 2012. The Company's 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.

Liquidity and Business Risks

As of September 30, 2023, the Company had an accumulated deficit of $ 912.6 million and cash and cash equivalents of $ 670.9 million.

Based on the Company's business plans, management believes that the Company's cash and cash equivalents at September 30, 2023, 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 research and 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 cash from operating activities primarily through its current cash and cash equivalents, payments pursuant to its agreements with Roche, Bristol Myers Squibb, and Novo Nordisk, and, to the extent necessary, through proceeds from public or private equity or debt financings, loans, and other collaborative agreements with corporate partners or other arrangements.

2. Summary of Significant Accounting Policies

Basis of Preparation and Presentation of Financial Information

These accompanying Unaudited Interim Condensed Consolidated Financial Statements have been prepared in accordance with the accounting principles generally accepted in the U.S. ("GAAP") and with the instructions for Form 10-Q and Regulation S-X statements. 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 U.S. Securities and Exchange Commission (the "SEC") on February 28, 2023 (the "2022 Form 10-K"). These Unaudited Interim Condensed Consolidated Financial Statements are presented in U.S. dollars, which is the functional currency of the Company and its consolidated subsidiaries. These Unaudited Interim Condensed Consolidated Financial Statements include the accounts of the Company and its consolidated subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Unaudited Interim Financial Information

The accompanying Unaudited 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 consolidated balance sheet data was derived from audited financial statements, however certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted. 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.

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, and related disclosures. On an ongoing basis, management evaluates its estimates, including critical accounting policies or estimates related to revenue recognition, leases and research and development expenses. The Company bases its estimates on historical experience and on various other market specific and other relevant assumptions that management believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Because of the uncertainties inherent in such estimates, actual results may differ materially from these estimates.

Significant Accounting Policies

There were no significant changes to the accounting policies during the nine months ended September 30, 2023, from the significant accounting policies described in Note 2 of the Notes to Consolidated Financial Statements in the 2022 Form 10-K.

Concentration of Credit Risks and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash and cash equivalents. The Company places its cash equivalents with multiple major and reputable financial institutions. To minimize our risk the Company and its subsidiaries invest pursuant to a Board approved investment policy, which specifies credit quality standards for our investments and limits the amount of credit exposure to any single issue, issuer or type of investment. The majority of cash and cash equivalents are invested in liquid money market funds. Cash deposits held with banks may exceed the amount of insurance provided on such deposits. To date, the Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company's business is primarily conducted in U.S. dollars except for its agreements with contract manufacturers for drug supplies which are denominated in Euros. The Company recorded a loss on foreign currency exchange rate differences of approxim ately $253,000 and $70,000 during the nine months ended September 30, 2023 and 2022, respectively. If the Company increases its business activities that require the use of foreign currencies, it may be exposed to losses if the Euro and other such currencies continue to strengthen against the U.S. dollar.

As of September 30, 2023, and December 31, 2022, approximately $2.4 million and $1.7 million, respectively, of the Company's property and equipment, net were held in the U.S. and nominal amount were in Ireland.

The Company is subject to a number of risks similar to other late-stage clinical biotechnology companies, including, but not limited to, the need to obtain adequate additional funding, possible failure of current or future preclinical testing or clinical trials, its reliance on third parties to conduct its clinical trials, the need to obtain regulatory and marketing approvals for its drug candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's drug candidates, its right to develop and commercialize its drug candidates pursuant to the terms and conditions of the licenses granted to the Company, protection of proprietary technology, and the need to secure and maintain adequate clinical trial management, manufacturing, packaging, labeling, storage, testing, and distribution arrangements with third parties. The Company also relies on third-party consultants to assist in managing these third parties and assist with its clinical trial operations and manufacturing. If the Company does not successfully commercialize or partner any of its drug candidates, it will be unable to generate product revenue or achieve profitability. Further, the Company is also subject to broad market risks and uncertainties resulting from recent events, such as the COVID-19 pandemic, the Russian invasion of Ukraine, inflation, rising interest rates, and recession risks, as well as supply chain and labor shortages.

Segments

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.

Recent Accounting Pronouncements

There were no new accounting pronouncements or changes to accounting pronouncements during the three and nine months ended September 30, 2023 that are of significance or potential significance to the Company.

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 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.

Level 2 — 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 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 consisted of $647.1 million and $599.1 million in money market funds included in cash and cash equivalents at September 30, 2023, and December 31, 2022, respectively.

4. Composition of Certain Balance Sheet Items

Prepaid and Other Current Assets

	September 30, 2023	December 31, 2022
Prepaid R&D expenses	$ 7,927	$ 5,325
Prepaid G&A expenses	2,218	1,597
Receivable from stock option exercises in-transit	—	62
Other	3,051	1,708
Prepaid and other current assets	$ 13,196	$ 8,692

Property and Equipment, net

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

	September 30, 2023	December 31, 2022
Machinery and equipment	$ 10,863	$ 9,901
Leasehold improvements	1,498	1,498
Purchased computer software	1,892	1,500
	14,253	12,899
Less: accumulated depreciation and amortization	(11,820)	(11,168)
Property and equipment, net	$ 2,433	$ 1,731

Depreciation expense was $0.2 million and $0.7 million for the three and nine months ended September 30, 2023 respectively, compared to $ 0.2 million and $0.5 million for the three and nine months ended September 30, 2022, respectively.

Other Current Liabilities

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

	September 30, 2023	December 31, 2022
Payroll and related expenses	$ 10,670	$ 11,060
Professional services	1,259	605
Other	1,847	503
Other current liabilities	$ 13,776	$ 12,168

5. Net Income (Loss) Per Ordinary Share

Basic net income (loss) per ordinary 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 per ordinary share would include the dilutive effect of ordinary shares potentially issuable upon the exercise of stock options outstanding. However, potentially issuable ordinary shares are not used in computing diluted net loss per ordinary share as their effect would be anti-dilutive due to the loss recorded during the nine months ended September 30, 2023 and three and nine months ended September 30, 2022, and therefore diluted net loss per share is equal to basic net loss per share. During the three months ended September 30, 2023, diluted net income per ordinary share is computed by giving effect to all dilutive potential ordinary shares including options.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Numerator:				
Net income (loss)	$ 21,907	$ (45,764)	$ (79,552)	$ (123,298)
Denominator:				
Weighted-average ordinary shares outstanding used in per share calculations - basic	53,559	46,986	53,064	46,833
Weighted-average ordinary shares outstanding used in per share calculations - diluted	58,004	46,986	53,064	46,833
Net income (loss) per share:				
Basic net income (loss) per ordinary share	$ 0.41	$ (0.97)	$ (1.50)	$ (2.63)
Diluted net income (loss) per ordinary share	$ 0.38	$ (0.97)	$ (1.50)	$ (2.63)

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 September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Stock options to purchase ordinary shares	2,110	10,019	9,939	10,019
Restricted Stock Units (RSU)	27	—	27	—
Total	2,137	10,019	9,966	10,019

6. Commitments and Contingencies

Lease Commitments

The Company currently has four leases relating to its facilities in South San Francisco and Brisbane, California, and Dublin, Ireland.

South San Francisco Facility

The Company has a noncancelable operating sublease (the "Lease") covering 128,751 square feet of office and laboratory space in South San Francisco, California, U.S. (the "SSF Facility"). The Lease includes a free rent period and escalating rent payments and has a remaining lease term of 0.25 years that expires on December 31, 2023, unless terminated earlier. The Company's obligation to pay rent commenced on August 1, 2016.

Total operating lease cost was $1.6 million and $4.8 million for the three and nine months ended September 30, 2023 respectively and $ 1.6 million and $4.8 million for the three and nine months ended September 30, 2022, respectively. Total cash paid against the operating lease liability was $ 1.6 million and $4.9 million for the three and nine months ended September 30, 2023 respectively and $ 1.6 million and $4.7 million for the three and nine months ended September 30, 2022, respectively.

The discount rate used to determine the lease liability was 4.25%

The Company obtained a standby letter of credit in April 2016 in the initial amount of $ 4.1 million, which may be drawn down by the sublandlord in the event the Company fails to fully and faithfully perform all of its obligations under the Lease and to compensate the sublandlord for all losses and damages the sublandlord may suffer as a result of the occurrence of any default on the part of Company not cured within the applicable cure period. This standby letter of credit is collateralized by a certificate of deposit of the same amount which is classified as restricted cash. The Company was entitled to a $1.4 million reduction in the face amount of the standby letter of credit on the third anniversary of the contractual rent commencement, which was received in 2019, and another $1.4 million on the fifth anniversary of the contractual rent commencement, which was received in September 2021. As a condition to the reduction of the standby letter of credit amount, no uncured default by the Company shall then exist under the Lease. As of September 30, 2023, none of the remaining standby letter of credit amount of $1.4 million has been used.

Sub-Sublease of South San Francisco Facility

On July 18, 2018, the Company entered into a Sub-Sublease Agreement (the "Sub-Sublease") with Assembly Biosciences, Inc. (the "Sub-Subtenant") to sub-sublease approximately 46,641 square feet of office and laboratory space of the SSF Facility to the Sub-Subtenant. The Sub-Sublease is considered an operating lease under ASC 842. For the three and nine months ended September 30, 2023, the Company recorded $0.7 million and $2.2 million respectively and $0.7 million, and $2.2 million for the three and nine months ended September 30, 2022 respectively, of sub-lease rental income as an offset to its operating expenses.

The Sub-Sublease provides for initial annual base rent for the complete Sub-Subleased Premises of approximately $ 2.7 million, with increases of approximately 3.5% in annual base rent on September 1, 2019, and each anniversary thereof. The Sub-Sublease rental income excludes reimbursements for executory costs received from the Sub-Subtenant. The Sub-Sublease became effective on September 24, 2018, and has a term of 5.2 years which terminates on December 15, 2023. The Sub-Sublease will terminate if the Lease or the corresponding master lease terminates. The Company or the Sub-Subtenant may elect, subject to limitations set forth in the Sub-Sublease, to terminate the Sub-Sublease following a material casualty or condemnation affecting the Subleased Premises. The Company may terminate the Sub-Sublease following an event of default,

which is defined in the Sub-Sublease to include, among other things, non-payment of amounts owing by the Sub-Subtenant under the Sub-Sublease.

The Company is required under the Lease to pay to the sublandlord 50% of that portion of the cash sums and other economic consideration received from the Sub-Subtenant that exceeds the base rent paid by the Company to the sublandlord after deducting certain of the Company's costs.

Dublin

In June 2021, the Company entered into a lease agreement for office space in Dublin, Ireland, which commenced in August 2021 and had an initial term of one year. In April 2023, the Company renewed the lease for another one year with a termination date of July 2024. In addition, the Company entered into a lease agreement for additional office space in Dublin, Ireland, which commenced in August 2023 and has an initial term of one year. Both of these leases have an automatic renewal clause, pursuant to which the agreement will be extended automatically for successive periods equal to the current term, unless the agreement is cancelled by the Company.

Brisbane Facility

On October 28, 2022, Prothena Biosciences Inc, a wholly owned subsidiary of the Company, entered into a noncancelable operating sublease (the "Brisbane Sublease") to sublease approximately 31,157 square feet of office and laboratory space located in Brisbane, California (the "Brisbane Facility") with Arcus Biosciences, Inc., (the "Sublandlord"). The Brisbane Sublease became effective on October 28, 2022. The Brisbane Sublease provides that the Company's obligation to pay rent commenced on July 1, 2023, which is subject to abatement for the first six months following such date, with the exception of the seventh rent payment that was due upon execution of the Brisbane Sublease. The Company is obligated to make lease payments totaling approximately $14.9 million over the lease term, which expires on September 30, 2028, unless terminated earlier. The Brisbane Sublease further provides that the Company is obligated to pay to the Sublandlord certain costs, including taxes and operating expenses. The Company has the option to extend the sublease by providing written notice at least nine months prior to the expiration of the sublease term. As of September 30, 2023, the Brisbane Sublease has a remaining lease term of 5.0 years.

The Brisbane Sublease is considered an operating lease and the accounting lease commencement date was on July 31, 2023 when the Company gained control over physical access to the Brisbane Facility. The Company recorded a right-of-use asset of approximately $11.4 million and lease liability of approximately $3.6 million relating to the Brisbane Sublease on the lease commencement date. The discount rate used to determine the lease liability was 5.76%. The initial measurement of right-of-use asset for the Brisbane Sublease includes the tenant improvement added by the Company wherein the lessor was deemed the accounting owner.

The Company is entitled to an improvement allowance of up to $ 9.3 million, to be used for costs incurred by the Company to construct certain improvements to the Brisbane Facility and to prepare for the Company's occupancy of the Brisbane Facility. As of September 30, 2023, $5.5 million has been received from the Sublandlord and the Company is obligated to fund construction costs incurred in excess of the improvement allowance.

Total operating lease cost for the Brisbane Sublease was $ 0.5 million and $ 0.5 million for the three and nine months ended September 30, 2023, respectively. Total cash paid against the operating lease liability was $0.2 million and $ 0.2 million for the three and nine months ended September 30, 2023, respectively.

In conjunction with the Brisbane Sublease, the Company obtained a standby letter of credit in the initial amount of $ 0.9 million, which may be drawn down by the Sublandlord in the event the Company fails to fully and faithfully perform all of its obligations under the Brisbane Sublease and to compensate the Sublandlord for all losses and damages the Sublandlord may suffer as a result of the occurrence of any default on the part of the Company not cured within the applicable cure period. As of September 30, 2023, none of the standby letter of credit amount of $ 0.9 million has been used.

Future minimum payments under the above-described noncancelable operating leases, including a reconciliation to the lease liabilities recognized in the Condensed Consolidated Balance Sheets, and future minimum rentals to be received under the Sub-Sublease as of September 30, 2023, are as follows (in thousands):

Year Ended December 31,	Operating Leases	Sub-Sublease Rental
2023 (3 months)	1,713	672
2024	2,828	—
2025	3,052	—
2026	3,158	—
2027	3,269	—
Thereafter	2,523	—
Total	$ 16,543	$ 672
Less: Present value adjustment	(5,808)	
Lease liability	$ 10,735	

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 liability 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 September 30, 2023, and 2022.

Other Commitments

In the normal course of business, the Company enters into various firm purchase commitments primarily related to research and development activities. As of September 30, 2023, the Company had non-cancelable purchase commitments to suppliers for $ 14.6 million of which $8.3 million is included in current liabilities, and contractual obligations under license agreements of $0.4 million of which $15,000 is included in current liabilities. The following is a summary of the Company's non-cancelable purchase commitments and contractual obligations as of September 30, 2023 (in thousands):

	Total	2023	2024	2025	2026	2027	Thereafter
Purchase Obligations [1]	$ 14,584	$ 14,426	$ 122	$ 36	$ —	$ —	$ —
Contractual obligations under license agreements	402	64	64	64	60	60	90
Total	$ 14,986	$ 14,490	$ 186	$ 100	$ 60	$ 60	$ 90

[1] *Purchase obligations consist of non-cancelable purchase commitments to suppliers and contract research organizations.*

7. Significant Agreements

Roche License Agreement

In December 2013, the Company through its wholly owned subsidiary Prothena Biosciences Limited and Prothena Biosciences Inc entered into a License, Development, and Commercialization Agreement (the “License Agreement”) with F. Hoffmann-La Roche Ltd. and Hoffmann-La Roche Inc. (together, “Roche”) to develop and commercialize certain antibodies that target α-synuclein, including prasinezumab, which are referred to collectively as “Licensed Products.” Upon the effectiveness of the License Agreement in January 2014, 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 retained certain

rights to conduct development of the Licensed Products and an option to co-promote prasinezumab 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 (or α-synuclein) potentially including incorporation of Roche's proprietary Brain Shuttle™ technology to potentially increase delivery of therapeutic antibodies to the brain. The License Agreement provided for Roche making an upfront payment to the Company of $30.0 million, which was received in February 2014; making a clinical milestone payment of $15.0 million upon initiation of the Phase 1 clinical trial for prasinezumab, which was received in May 2014; making a clinical milestone payment of $30.0 million upon dosing of the first patient in the Phase 2 clinical trial for prasinezumab, which was achieved in June 2017; and making a clinical milestone payment of $60.0 million upon dosing of the first patient in the global Phase 2b PADOVA study for prasinezumab, which was achieved in May 2021.

For prasinezumab, Roche is obligated to pay:

- up to $290.0 million upon the achievement of development, regulatory, and various first commercial sales milestones;
- up to $155.0 million upon achievement of U.S. commercial sales milestones;
- up to $175.0 million upon achievement of ex-U.S. commercial sales milestones; and
- tiered, high single-digit to high double-digit royalties in the teens based on U.S. and ex-U.S. annual net sales, subject to certain adjustments, with respect to the applicable Licensed Product.

Roche bore 100% of the cost of conducting the research collaboration under the License Agreement during the research term, which expired December 31, 2017. In May 2021, the Company exercised its rights under the terms of License Agreement to receive potential U.S. commercial sales milestone and royalties, in lieu of a U.S. profit and loss share for prasinezumab in Parkinson's disease. Thus in the U.S., through May 28, 2021, the parties shared all development costs, all of which were allocated 70% to Roche and 30% to the Company, for prasinezumab in the Parkinson's disease indication. If the Company opts in to participate in co-development and co-funding for any other Licensed Products and/or indications, 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.

The Company initiated a Phase 1 clinical trial for prasinezumab in 2014. Following the Phase 1 clinical trial, Roche became primarily responsible for developing, obtaining and maintaining regulatory approval for and commercializing Licensed Products. Roche also became responsible for the clinical and commercial manufacture and supply of Licensed Products.

In addition, the Company has an option under the License Agreement to co-promote prasinezumab 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 that are specifically related to obtaining or maintaining regulatory approval 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.

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.

Performance Obligations

As of September 30, 2023, and December 31, 2022, there were no remaining performance obligations under License Agreement since the obligations related to research and development activities were only for the Phase 1 clinical trial and the remaining obligations were delivered or performed.

Milestone Accounting

Under the License Agreement, only if the U.S. and or global options are exercised, the Company is eligible to receive milestone payments upon the achievement of development, regulatory and various first commercial sales milestones. Milestone payments are evaluated under ASC Topic 606. 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. Accordingly, the Company estimates payments in the transaction price based on the most likely approach, which considers the single most likely amount in a range of possible amounts related to the achievement of these milestones. Additionally, milestone payments are included in the transaction price only when the Company can conclude it is probable that a significant revenue reversal will not occur in future periods when the milestone is achieved.

The Company excludes the milestone payments and royalties in the initial transaction price calculation because such payments are considered to be variable considerations with constraint. Such milestone payments and royalties will be recognized as revenue once the Company can conclude it is probable that a significant revenue reversal will not occur in future periods.

The clinical and regulatory milestones under the License Agreement after the point at which the Company could opt out are considered to be variable considerations with constraint due to the fact that active participation in the development activities that generate the milestones is not required under the License Agreement, and the Company can opt out of these activities. There are no refunds 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 when the Company can conclude it is probable that a significant revenue reversal will not occur in future periods.

Collaboration Agreement with Bristol Myers Squibb

Overview

On March 20, 2018, the Company, through its wholly owned subsidiary Prothena Biosciences Limited (“PBL”), entered into a Master Collaboration Agreement (the “Collaboration Agreement”) with Celgene Switzerland LLC (“Celgene”), a subsidiary of Celgene Corporation (which was acquired by Bristol Myers Squibb (“BMS”) in November 2019), pursuant to which Prothena granted to Celgene a right to elect in its sole discretion to exclusively license rights both in the U.S. (the “US Rights”) and on a global basis (the “Global Rights”), with respect to the Company’s programs to develop and commercialize antibodies targeting tau, TDP-43 and an undisclosed target (the “Collaboration Targets”). For each such program, BMS may exercise its US Rights at the IND filing, and if it so exercises such US Rights would also have a right to expand the license to Global Rights. If BMS exercises its US Rights for a program, then following the first to occur of (a) completion by the Company, in its discretion and at its cost, of Phase 1 clinical trials for such program or (b) the date on which BMS elects to assume responsibility for completing such Phase 1 clinical trials (at its cost), BMS would have decision making authority over development activities and all regulatory, manufacturing and commercialization activities in the U.S.

As discussed below, BMS exercised its US Rights for the tau/BMS-986446 (formerly PRX005) Collaboration Target and on July 30, 2021, PBL entered into a U.S. License Agreement granting BMS the exclusive license to develop, manufacture and commercialize antibody products in the United States targeting tau (the “Tau US License Agreement”). Subsequently, BMS exercised its Global Rights for the tau/BMS-986446 Collaboration Target and on July 5, 2023, PBL entered into a Global License Agreement granting BMS the exclusive license to develop, manufacture and commercialize tau Collaboration Products globally for any and all uses or purposes with respect to any human or animal disease, disorder or condition (the “Tau Global License Agreement”). The Tau Global License Agreement supersedes and replaces the Tau US License Agreement in its entirety.

The Collaboration Agreement provided for Celgene making an upfront payment to the Company of $ 100.0 million which was received in April 2018, plus future potential license exercise payments and regulatory and commercial milestones for each program under the Collaboration Agreement, as well as royalties on net sales of any resulting marketed products. In connection with the Collaboration Agreement, the Company and Celgene entered into a Share Subscription Agreement on March 20, 2018, under which Celgene subscribed to 1,174,536 of the Company’s ordinary shares for a price of $ 42.57 per share, for a total of approximately $50.0 million.

BMS US and Global Rights and Licenses

On a program-by-program basis, beginning on the effective date of the Collaboration Agreement and ending on the date that the IND Option term expires for such program (which generally occurs sixty days after the date on which the Company delivers to BMS the first complete data package for an IND that was filed for a lead candidate from the relevant program), BMS may elect in its sole discretion to exercise its US Rights to receive an exclusive license to develop, manufacture and commercialize antibodies targeting the applicable Collaboration Target in the U.S. (the "US License"). If BMS exercises its US Rights for a collaboration program, it is obligated to pay the Company an exercise fee of approximately $80.0 million per program. Thereafter, following the first to occur of (a) completion by the Company, in its discretion and at its cost, of Phase 1 clinical trials for such program or (b) BMS's election to assume responsibility to complete such Phase 1 clinical trials (at its cost), BMS would have the sole right to develop, manufacture and commercialize antibody products targeting the relevant Collaboration Target for such program (the "Collaboration Products") in the U.S.

On a program-by-program basis, following completion of a Phase 1 clinical trial for a collaboration program for which BMS has previously exercised its US Rights, BMS may elect in its sole discretion to exercise its Global Rights with respect to such collaboration program to receive a worldwide, exclusive license to develop, manufacture and commercialize antibodies targeting the applicable Collaboration Target (the "Global License"). If BMS exercises its Global Rights, BMS would be obligated to pay the Company an additional exercise fee of $55.0 million for such collaboration program. The Global Rights would then replace the US Rights for that collaboration program, and BMS would have decision making authority over developing, obtaining and maintaining regulatory approval for, manufacturing and commercializing the Collaboration Products worldwide.

After BMS's exercise of Global Rights for a collaboration program, the Company is eligible to receive up to $ 562.5 million in regulatory and commercial milestones per program. Following an exercise by BMS of either US Rights or Global Rights for such collaboration program, the Company will also be eligible to receive tiered royalties on net sales of Collaboration Products ranging from high single digit to high teen percentages, on a weighted average basis depending on the achievement of certain net sales thresholds. Such exercise fees, milestones and royalty payments are subject to certain reductions as specified in the Collaboration Agreement, the agreement for US Rights and the agreement for Global Rights.

BMS will continue to pay royalties on a Collaboration Product-by-Collaboration Product and country-by-country basis, until the latest of (i) expiration of certain patents covering the Collaboration Product, (ii) expiration of all regulatory exclusivity for the Collaboration Product, and (iii) an agreed period of time after the first commercial sale of the Collaboration Product in the applicable country (the "Royalty Term").

Term and Termination

The research term under the Collaboration Agreement continues for a period of six years, which BMS may extend for up to two additional 12-month periods by paying an extension fee of $10.0 million per extension period. The term of the Collaboration Agreement continues until the last to occur of the following: (i) expiration of the research term; (ii) expiration of all US Rights terms; and (iii) expiration of all Global Rights terms.

The term of any US License or Global License would continue on a Licensed Product-by-Licensed Product and country-by-country basis until the expiration of all Royalty Terms under such agreement.

The Collaboration Agreement may be terminated (i) by either party on a program-by-program basis if the other party remains in material breach of the Collaboration Agreement following a cure period to remedy the material breach, (ii) by BMS at will on a program-by-program basis or in its entirety, (iii) by either party, in its entirety, upon insolvency of the other party, or (iv) by the Company, in its entirety, if BMS challenges a patent licensed by the Company to BMS under the Collaboration Agreement.

Performance Obligations

The Company assessed the Collaboration Agreement and concluded that it represented a contract with a customer within the scope of ASC 606. Per ASC 606, a performance obligation is defined as a promise to transfer a good or service or a series of distinct goods or services. At inception of the Collaboration Agreement, the Company is not obligated to transfer the US License or Global License to BMS unless BMS exercises its US Rights or Global Rights, respectively, and the Company is not obligated to perform development activities under the development plan during preclinical and Phase 1 clinical trials including the regulatory filing of the IND.

The discovery, preclinical and clinical development activities performed by the Company are to be performed at the Company's discretion and are not promised goods or services and therefore are not considered performance obligations under ASC 606, unless and until the Company agrees to perform the Phase 1 clinical trials (after the IND option exercise) that are determined to be performance obligations at the time the option is exercised. Per the terms of the Collaboration Agreement, the Company may conduct discovery activities to characterize, identify and generate antibodies to become collaboration candidates that target such Collaboration Target, and thereafter may pre-clinically develop collaboration candidates to identify lead candidates that target such Collaboration Target and file an IND with the U.S. Food and Drug Administration (the "FDA") for a Phase 1 clinical trial for such lead candidates. In the event the Company agrees to be involved in a Phase 1 clinical trial, the Company will further evaluate whether any such promise represents a performance obligation at the time the option is exercised. If it is concluded that the Company has obligated itself to an additional performance obligation besides the license granted at IND option exercise, then the effects of the changes in the arrangement will be evaluated under the modification guidance of ASC 606.

The Company is not obligated to perform manufacturing activities. Per the terms of the Collaboration Agreement, to the extent that the Company, at its discretion, conducts a program, the Company shall be responsible for the manufacture of collaboration candidates and collaboration products for use in such program, as well as the associated costs. Delivery of manufactured compound (clinical product supply) is not deemed a performance obligation under ASC 606 as the Company is not obligated to transfer supply of collaboration product to BMS unless BMS exercises its right to participate in the Phase 1 development.

Compensation for the Company's provision of inventory supply, to the extent requested by BMS would be paid to the Company by BMS at a reasonable stand-alone selling price for such supply. Given that (i) there is substantial uncertainty about the development of the programs, (ii) the pricing for the inventory is at its standalone selling price and (iii) the manufacturing services require the entity to transfer additional goods or services that are incremental to the goods and services provided prior to the resolution of the contingency, the Company's supply of product is not a material right. Therefore, the inventory supply is not considered a performance obligation unless and until, requested by BMS.

In addition to the grant of the US License after BMS exercises its US Rights for a program, BMS is entitled to receive certain ancillary development services from the Company, such as technology transfer assistance, regulatory support, safety data reporting activities and transition supply, if requested by BMS.

In addition to the grant of the Global License after BMS exercises the Global Rights for a program, BMS is entitled to receive certain ancillary development services from the Company, such as ongoing clinical trial support upon request by BMS, transition supply, if requested by BMS, and regulatory support for coordination of pharmacovigilance matters.

The Company evaluated the potential obligations to transfer the US Licenses and Global Licenses and performance of the ancillary development services subsequent to exercise of the US Rights and Global Rights, if the options are exercised by BMS, under ASC 606-10-55-42 and 55-43 to determine whether the US Rights or the Global Rights provided BMS a "material right" and concluded that BMS's options to exercise its US Rights and Global Rights represented "material rights" to BMS that it would not have received without entering into the Agreement.

There were a total of six options at inception including US Rights and Global Rights to acquire a US License and a Global License, respectively, and rights to request certain development services (following exercise of the US Rights and Global Rights, respectively) for each of the three programs, with four options remaining as of September 30, 2023. Per ASC 606, the US Rights and Global Rights are material rights and therefore are performance obligations. The goods and services underlying the options are not accounted for as separate performance obligations, but rather become performance obligations, if and when, an option is exercised.

US License Agreement for the Tau/ BMS-986446 *Collaboration Target*

On July 30, 2021, the Company entered into the Tau US License Agreement. The Tau US License Agreement included an upfront payment of $ 80.0 million.

The Tau US License Agreement included the following distinct performance obligations: (1) the delivery of the US License for tau/BMS-986446 Collaboration Target ("Tau US License Obligation"); and (2) the Company's obligation to provide development activities under the development plan during any Phase 1 clinical trials (the "Tau US Development Services Obligation"). Revenue allocated to the Tau US License Obligation is recognized when the Company has satisfied its obligation at a point in time, while the revenue allocated to the Tau US Development Services Obligation are recognized over time using an input-based model.

Global License Agreement for the Tau/BMS-986446 Collaboration Target

On July 5, 2023, the Company entered into the Tau Global License Agreement, which as discussed above supersedes and replaces the Tau US License Agreement in its entirety. The Company received the associated option exercise fee of $55.0 million in August 2023 and it will be eligible to receive regulatory and sales milestones up to $562.5 million upon achievement of certain developmental events, including regulatory approval of a tau Collaboration Product, and on BMS achieving certain annual net sales thresholds in the United States and worldwide. The Company also will be eligible to receive tiered royalties on net sales of tau Collaboration Products, ranging from high single digit to high teen percentages, on a weighted average basis depending on the achievement of certain net sales thresholds.

The Company's distinct performance obligation under the Tau Global License Agreement was limited to the delivery of the Global License for tau/ BMS-986446 Collaboration Target ("Tau Global License Obligation"). Revenue allocated to the Tau Global License Obligation is recognized when the Company has satisfied its obligation at a point in time.

Transaction Price

At the inception of the Collaboration Agreement, the Company did not transfer any goods or services to BMS (formerly Celgene) that are material. Accordingly, the Company has concluded that the initial transaction price will be recognized as a contract liability and will be deferred until the Company transfers control of goods or services to BMS (which would be when BMS exercises the US Right or Global Right and receives control of the US License or Global License for at least one of the programs), or when the IND Option term expires if BMS does not exercise the US Right (which is generally sixty days after the date on which the Company delivers to BMS the first complete data package for an IND that was filed for a lead candidate from the relevant program), or when the Phase 1 Option term expires if BMS does not exercise the Global Right (which is generally ninety days after the date on which the Company delivers to BMS the first complete data package for a Phase 1 clinical trial for a lead candidate from the relevant program) or at the termination of the Collaboration Agreement, whichever occurs first. At such point that the Company transfers control of goods or services to BMS, or when the option expires, the Company will recognize revenue as a continuation of the original contract. Under this approach, the Company will treat the consideration allocated to the material right as an addition to the consideration for the goods or services underlying the contract option.

At inception of the Collaboration Agreement, the Company estimated the standalone selling price for each performance obligation (i.e., the US Rights and Global Rights by program). The estimate of standalone selling price for the US Rights and Global Rights by program was based on the adjusted market assessment approach using a discounted cash flow model. The key assumptions used in the discounted cash flow model included the market opportunity for commercialization of each program in the U.S. or globally depending on the license, the probability of successfully developing and commercializing a given program target, the estimated remaining development costs for the respective program, the estimated time to commercialization of the drug for that program and a discount rate.

The initial transaction price under the Collaboration Agreement, pursuant to ASC 606, was $ 110.2 million, including the $100.0 million upfront payment and $10.2 million premium on the ordinary shares purchased under the SSA. The Company allocated the initial transaction price across the US Rights and Global Rights for each program in a range of approximately $15-$25 million and $10-$18 million, respectively.

The Company did not include the option fees in the initial transaction price because such fees are contingent on the options to the US Rights and the Global Rights being exercised. Upon the exercise of the US Rights and the Global Rights for a program, the Company will have the obligation to deliver the US License and Global License and provide certain ancillary development services if requested by BMS, subsequent to its exercise of the US Rights and Global Rights, respectively, for such program. The Company will include the option fees in the transaction price at the point in time a material right is exercised and the Company transfers control of the goods and services to BMS. In addition, the Company did not include in the initial transaction price certain clinical and regulatory milestone payments since they relate to licenses for which BMS has not yet exercised its option to obtain and these variable considerations are constrained due to the likelihood of a significant revenue reversal.

Upon entering into the Tau US License Agreement, the Company granted BMS a US License for the tau/BMS-986446 Collaboration Target, which transferred control of such underlying US License to BMS. Following execution of the Tau US License Agreement, BMS paid the Company a $80.0 million option exercise fee. Under the continuation of the original contract method, the Company computed the relative sales price after the Company transferred control of the US License for tau/BMS-986446. The Company used the original allocated consideration for the US Right for tau/BMS-986446 of $24.9 million (computed at the inception of the contract) plus the $80.0 million option exercise fee to arrive at the total transaction price of approximately $ 104.9 million. This total transaction price was further allocated using the relative sales price method between the Tau US License Obligation and the Tau US Development Services Obligation.

The best estimate of selling price for the US License for tau/BMS-986446 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 included the market opportunity for commercialization of tau/BMS-986446, the probability of successfully developing/commercializing BMS-986446, the remaining development costs for tau/BMS-986446, and the estimated time to commercialization of tau/BMS-986446. Based on the relative selling price method, the amount that the Company allocated to the performance obligations is as follows: $77.5 million to the license to be recognized concurrent with the delivery of the license; and $ 27.5 million as development services to be recognized based on percentage of completion over the service period estimated to be from 2021-2024.

Upon entering into the Tau Global License Agreement, the Company granted BMS a Global License for the tau/BMS-986446 Collaboration Target, which transferred control of such underlying Global License to BMS. Following execution of the Tau Global License Agreement, BMS paid the Company a $55.0 million option exercise fee. Under the continuation of the original contract method, the Company computed the relative sales price after the Company transferred control of the Global License for tau/BMS-986446. The Company used the original allocated consideration for the Global Right for tau/BMS-986446 of $17.9 million (computed at the inception of the contract) plus the $ 55.0 million option exercise fee to arrive at the total transaction price of approximately $72.9 million. Given that the Company's distinct performance obligation under the Tau Global License Agreement was limited to the Tau Global License Obligation no further allocation was required.

Significant Payment Terms

The upfront payment of $100.0 million was received in April 2018, while all option fees and milestone payments are due within 30 days after the achievement of the relevant milestone by BMS or receipt by BMS of an invoice for such an amount from the Company.

The Collaboration Agreement does not have a significant financing component since a substantial amount of consideration promised by BMS to the Company is variable and the amount of such variable consideration varies based upon the occurrence or non-occurrence of future events that are not within the control of either BMS or the Company. Variable considerations related to clinical and regulatory milestone payments and option fees are constrained due to the likelihood of a significant revenue reversal.

Revenue and Expense Recognition

For the three and nine months ended September 30, 2023 , collaboration revenue from BMS of $ 84.9 million and $91.0 million and for three and nine months ended September 30, 2022, $1.5 million and $3.9 million, respectively. Collaboration revenue for the three and nine months ended September 30, 2023 included $72.9 million recognized for the tau Global License Obligation ($ 55.0 million tau global option exercise fee and $ 17.9 million of deferred revenue recognized for the Global Right for the tau Collaboration Product), $4.7 million under a supply agreement with BMS and the remainder was primarily recognized for tau US Development Services Obligation. As of September 30, 2023, the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied was $0.3 million. The Company had $5.2 million and nil accounts receivable from BMS at September 30, 2023, and December 31, 2022, respectively.

Deferred Revenue

The deferred revenue balance at the beginning of the quarter ended September 30, 2023 was $ 92.5 million of which $17.9 million was recognized as revenue for the Global Right for the tau Collaboration Product and $6.9 million was recognized as revenue related to the Tau US Development Services Obligation performed during the quarter ended September 30, 2023. As of September 30, 2023, the deferred revenue balance was $67.7 million, of which $0.3 million was current and the balance of $ 67.4 million was long term deferred revenue. The deferred revenue balance as of September 30, 2023, includes amounts deferred related to outstanding US Rights and Global Rights of $67.4 million and unsatisfied performance obligations for the US Rights for the tau/BMS-986446 program of $0.3 million.

Milestone and Royalties Accounting

The Company is eligible to receive milestone payments of up to $ 90.0 million per program upon the achievement of certain specified regulatory milestones and milestone payments of up to $375.0 million per program upon the achievement of certain specified commercial sales milestones under the US License for such program. The Company is also eligible to receive milestone payments of up to $187.5 million per program upon the achievement of certain specified regulatory milestones and milestone payments of up $375.0 million per program upon the achievement of certain specified commercial sale milestones under the Global License for such program. Milestone payments are evaluated under ASC Topic 606. 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. Accordingly, the Company estimates payments in the transaction price based on the most likely approach, which considers the single most likely amount in a range of possible amounts related to the achievement of these milestones. Additionally, milestone payments are included in the transaction price only when the Company can conclude it is probable that a significant revenue reversal will not occur in future periods.

The Company excluded the milestone payments and royalties in the initial transaction price because such payments are considered to be variable considerations with constraint. Such milestone payments and royalties will be recognized as revenue at a point in time when the Company can conclude it is probable that a significant revenue reversal will not occur in future periods.

The Company did not achieve any clinical and regulatory milestones under the Collaboration Agreement during the three and nine months ended September 30, 2023 and 2022.

Novo Nordisk Share Purchase Agreement

On July 8, 2021, the Company together with its wholly owned subsidiary, Prothena Biosciences Limited ("PBL"), entered into a definitive share purchase agreement with Novo Nordisk A/S and Novo Nordisk Region Europe A/S (each an unrelated party). Under the terms of such agreement, Novo Nordisk acquired PBL's wholly-owned subsidiary, Neotope Neuroscience Limited ("NNL") and gained full worldwide rights to the intellectual property and related rights to the Company's ATTR amyloidosis business and pipeline. Upon consummation of the transaction, NNL ceased to be a related party of PBL. The aggregate purchase price consisted of an upfront payment of $60.0 million in cash, subject to customary purchase price adjustments.

Should Novo Nordisk achieve certain stages of development or commercialization for products or product candidates containing NNC6019 (formerly PRX004) or a derivative thereof in ATTR amyloidosis, PBL is entitled to receive certain milestone payments based on specified development and commercial milestones. The development and commercialization milestone payments will be discounted if the milestone events are achieved with respect to other indications. Should Novo Nordisk achieve specified thresholds of worldwide, annual net sales of the milestone products, regardless of indication, PBL will also be entitled to receive specified one-time net sales milestone payments. All milestone payments attributable to an achieved milestone will be paid to PBL, subject to Novo Nordisk's offset right for indemnity claims or unpaid amounts in respect of any purchase price adjustment.

The upfront payment of $60.0 million was accounted for as revenue in 2021. In addition to the upfront payment, Novo Nordisk agreed to pay for certain out of pocket expenses under the Transition Services Agreement, which netted to $0.7 million after closing adjustments related to the sale of the ATTR amyloidosis business and pipeline.

Contingent Consideration /Milestone Accounting

In December 2022, the Company received a $40.0 million development milestone payment related to the continued advancement of NNC6019 in a Phase 2 clinical trial for the treatment of ATTR cardiomyopathy. This amount was accounted for as revenue from license and intellectual property in 2022.

The Company is eligible to receive additional development and sales milestone payments from Novo Nordisk totaling up to $ 1.13 billion upon achievement of certain specified development and commercial sales milestones under the share purchase agreement.

The Company excluded the milestone payments in the initial transaction price because such payments are considered to be variable considerations with constraint. Such milestone payments will be recognized as revenue at a point in time when the Company can conclude it is probable that a significant revenue reversal will not occur in future periods.

Revenue Recognition

Total revenue recognized related to the transaction during th e nine months ended September 30, 2023 and 2022 w as nil and nil, respectively. The Company had no accounts receivable from Novo Nordisk as of September 30, 2023 and December 31, 2022, respectively.

8. Shareholders' Equity

Ordinary Shares

As of September 30, 2023, the Company had 100,000,000 ordinary shares authorized for issuance with a par value of $ 0.01 per ordinary share and 53,638,615 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 September 30, 2023, 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 September 30, 2023. 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.

December 2022 Offering

In December 2022, the Company completed an underwritten public offering of an aggregate of 3,250,000 of its ordinary shares at a public offering price of $56.50 per ordinary share. The Company received aggregate net proceeds of approximately $ 172.4 million, after deducting the underwriting discount and offering costs.

In January 2023, the Company issued an additional 395,096 ordinary shares resulting from the underwriter's partial exercise of their 30-day option to purchase up to an additional 487,500 ordinary shares of as part of the December 2022 underwritten public offering. The Company received approximately $20.9 million proceeds from the exercise, net of underwriting discount but before deducting any offering costs.

At-the-Market Offering

In December 2021, the Company entered into an Equity Distribution Agreement (the "December 2021 Distribution Agreement"), pursuant to which the Company may issue and sell, from time to time, the Company's ordinary shares. In connection with entering into the December 2021 Distribution Agreement, on December 23, 2021, the Company filed with the SEC a prospectus supplement relating to the offer, issuance and sale of up to $250.0 million of the Company's ordinary shares pursuant to the December 2021 Distribution Agreement.

For the three and nine months ended September 30, 2023, the Company sold and issued nil and 42,361 ordinary shares, respectively, pursuant to the December 2021 Distribution Agreement. For the nine months ended September 30, 2023, total gross proceeds was approximately $3.2 million before deducting underwriting discounts, commissions, and other offering expenses payable by the Company of $0.1 million. As of September 30, 2023, the Company has sold and issued 953,589 ordinary shares for total gross proceeds of approximately $56.3 million before deducting underwriting discounts, commissions, and other offering expenses payable by the Company of $1.8 million.

The issuance and sale of the Company's ordinary shares pursuant to the December 2021 Distribution Agreement is deemed an "at-the-market" offering and is registered under the Securities Act of 1933, as amended.

9. Share-Based Compensation

Equity Incentive Plans

The Company's equity incentive plans, the 2018 Long Term Incentive Plan, as amended (the "2018 LTIP"), 2020 Employment Inducement Incentive Plan, as amended (the "2020 EIIP"), and previously, the Amended and Restated 2012 Long Term Incentive Plan (the "2012 LTIP"), reserve ordinary shares for the issuance of ISOs, NQSOs, SARs, restricted shares, RSUs, performance bonus awards, performance share units awards, dividend equivalents and other share or cash-based awards to eligible individuals. Options granted under each of the 2018 LTIP, 2020 EIIP, and 2012 LTIP expire no later than ten years from the date of grant.

In May 2023, the Company's shareholders approved an amendment to the 2018 LTIP to increase the number of ordinary shares available for issuance under the 2018 LTIP by 2,000,000 ordinary shares. As of September 30, 2023, the number of ordinary shares authorized under the 2018 LTIP was 14,614,183. Upon adoption of the 2018 LTIP, no new awards are permitted under the 2012 LTIP.

As of September 30, 2023, the number of ordinary shares authorized under the 2020 EIIP was 1,485,000 and 35,834 ordinary shares remained available for future awards under the 2020 EIIP. The Company's Board of Directors has adopted a

series of amendments to increase the ordinary shares available for issuance under the 2020 EIIP and it reserves the right to both amend the 2020 EIIP to increase the number of ordinary shares available and make additional awards to key new hires.

The Company granted 245,250 and 193,500 options during the three months ended September 30, 2023 and 2022, respectively, and 1,731,621 and 2,219,686 options during the nine months ended September 30, 2023 and 2022, respectively, in aggregate under its equity plans. The Company's option awards generally vest over four years, while RSUs vest over two years. As of September 30, 2023, 3,556,448 ordinary shares remained available for grant under its equity plans, 27,000 RSUs were outstanding and unvested, and options to purchase 9,939,093 ordinary shares in aggregate under the Company's equity plans were outstanding with a weighted-average exercise price of approximately $29.15 per share.

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 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. The simplified method has been used to estimate the expected life of all options in previous years. Beginning January 1, 2023, expected term was estimated based on historical experience. 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. The estimated forfeiture rate as of September 30, 2023 was 8%. Changes in our estimates and assumptions relating to forfeitures may cause us to realize material changes in stock-based compensation expense in the future.

The amount of unearned share-based compensation related to unvested stock options at September 30, 2023, is $100.4 million. The weighted-average period over which the unearned share-based compensation related to stock options is expected to be recognized is 2.58 years.

Share-based compensation expense recorded in these Condensed Consolidated Financial Statements for the three and nine months ended September 30, 2023 and 2022, was based on awards granted under the 2012 LTIP, the 2018 LTIP, and the 2020 EIIP.

The following table summarizes share-based compensation expense for the periods presented (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Research and development	$ 4,948	$ 4,176	$ 14,178	$ 11,268
General and administrative	5,996	3,790	15,656	12,621
Total share-based compensation expense	$ 10,944	$ 7,966	$ 29,834	$ 23,889

The Company recognized tax benefits from share-based awards of $1.9 million and $1.5 million for the three months ended September 30, 2023 and 2022, respectively and $5.3 million and $4.5 million for the nine months ended September 30, 2023 and 2022, respectively.

The fair value of the options granted to employees and non-employee directors during the three and nine months ended September 30, 2023 and 2022 was estimated as of the grant date using the Black-Scholes option-pricing model assuming the weighted-average assumptions listed in the following table:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Expected volatility	76.8%	82.3%	81.3%	82.2%
Risk-free interest rate	4.3%	2.9%	4.2%	2.1%
Expected dividend yield	—%	—%	—%	—%
Expected term (in years)	4.42	6.00	4.81	6.00
Weighted average grant date fair value	$40.83	$20.38	$37.67	$22.53

The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period for each award. Each of the inputs discussed above is subjective and generally requires significant management judgment to determine.

The following table summarizes the Company's stock option activity during the nine months ended September 30, 2023:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2022	9,479,998	$ 23.16	6.82	$ 354,856
Granted	1,731,621	56.94		
Exercised	(1,097,550)	19.05		
Forfeited	(174,976)	43.04		
Expired	—	—		
Outstanding at September 30, 2023	9,939,093	$ 29.15	6.84	$ 212,009
Vested and expected to vest at September 30, 2023	9,562,960	$ 28.48	6.75	$ 209,155
Vested at September 30, 2023	6,095,330	$ 20.52	5.68	$ 172,377

The total intrinsic value of options exercised was $ 5.7 million and $20.0 million during the three months ended September 30, 2023 and 2022, respectively, and $51.1 million and $22.6 million during the nine months ended September 30, 2023 and 2022, respectively, determined as of the date of exercise.

The following table summarizes the activity and related information for RSUs during the nine months ended September 30, 2023:

	Number of Units	Weighted Average Grant-Date Fair Value	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2022	23,000	$60.89	1.67	$1,386
Units Granted	4,000	68.71		
Units Vested	—	—		
Units Forfeited	—	—		
Outstanding at September 30, 2023	27,000	$62.05	1.01	$1,303

The fair value of RSUs was determined on the date of grant based on the market price of the Company's ordinary shares as of that date. The fair value of the RSUs is recognized as an expense on a straight-line basis over the vesting period of each RSU. Upon the vesting of the RSUs, a portion of the shares vested are sold by the employee to satisfy employee withholding tax requirements (sell-to-cover). The total fair value of shares vested during the nine months ended September 30, 2023 was nil. As of September 30, 2023, total compensation cost not yet recognized related to unvested RSUs was $ 1.1 million, which is expected to be recognized over a weighted-average period of 1.26 years. RSUs settle into ordinary shares upon vesting.

10. Income Taxes

The major taxing jurisdictions for the Company are Ireland and the U.S. The Company recorded an income tax benefit of $3.1 million and $10.3 million for the three and nine months ended September 30, 2023 as compared to $2.7 million and $5.7

million for the three and nine months ended September 30, 2022, 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, U.S. income taxed at different rates, adjustments to deferred tax assets for the deductibility of stock compensation and capitalization of research and development costs.

The Company has historically computed its interim period provision for (benefit from) income taxes by applying its forecasted effective tax rate to year-to-date earnings. However, due to a significant amount of U.S. permanent differences relative to the amount of U.S. forecasted income used in computing the effective tax rate, the effective tax rate is highly sensitive to minor fluctuations in U.S. forecasted income. As such, the Company has computed the U.S. component of the consolidated provision for (benefit from) income taxes for the three and nine months ended September 30, 2023 using an actual year-to-date tax calculation.

The non-U.S. tax expense continues to be zero due to cumulative historic and year-to-date losses and a full valuation allowance on our deferred tax assets in our non-U.S. jurisdictions.

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The Company's deferred tax assets (“DTA”) are composed primarily of its Irish subsidiaries' net operating loss carryforwards, California net operating loss carryforwards available to reduce future taxable income of the Company's U.S. subsidiaries, federal and California tax credit carryforwards, share-based compensation, capitalized R&D, and other temporary differences. The Company maintains a valuation allowance against certain U.S. federal and state and Irish deferred tax assets. Each reporting period, the Company evaluates the need for a valuation allowance on its deferred tax assets by jurisdiction.

No provision for income tax in Ireland has been recognized on undistributed earnings of the Company’s U.S. subsidiaries as the Company considers the U.S. earnings to be indefinitely reinvested.

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

In addition to historical information, this Quarterly Report on Form 10-Q contains forward-looking statements which may cause our actual results to differ materially from expectations, plans and anticipated results discussed in forward-looking statements. Factors that could cause our actual results to differ materially include, but are not limited to, the risks and uncertainties set forth in the “Summary of Risks Affecting Our Business” at the beginning of this Quarterly Report on Form 10-Q, Part II Item 1A “Risk Factors” of this Quarterly Report on Form 10-Q, and in our other filings with the U.S. Securities and Exchange Commission.

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 Annual Report on Form 10-K filed with the SEC on February 28, 2023 (the “2022 Form 10-K”).

Overview

Prothena is a late-stage clinical biotechnology company with expertise in protein dysregulation and a pipeline of investigational therapeutics with the potential to change the course of devastating neurodegenerative and rare peripheral amyloid diseases.

Fueled by our deep scientific expertise built over decades of research, we are advancing a pipeline of therapeutic candidates for a number of indications and novel targets for which our ability to integrate scientific insights around neurological dysfunction and the biology of misfolded proteins can be leveraged. Our wholly-owned programs include birtamimab for the potential treatment of AL amyloidosis, and a portfolio of programs for the potential treatment of Alzheimer’s disease including PRX012, which targets Amyloid beta (Aβ), and PRX123, a novel dual Aβ-tau vaccine. Our partnered programs include prasinezumab, in collaboration with Roche for the potential treatment of Parkinson’s disease and other related synucleinopathies, and programs that target tau (BMS-986446, formerly PRX005), TDP-43, and an undisclosed target (PRX019) in collaboration with Bristol Myers Squibb (BMS) for the potential treatment of Alzheimer’s disease, amyotrophic lateral sclerosis (ALS), and other neurodegenerative diseases. We are also entitled to certain potential milestone payments pursuant to our share purchase agreement with Novo Nordisk pertaining to our ATTR amyloidosis business.

We were formed on September 26, 2012, under the laws of Ireland and re-registered as an Irish public limited company on October 25, 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.

Birtamimab for the Potential Treatment of AL Amyloidosis

Birtamimab is an investigational humanized antibody that targets toxic misfolded light chain that causes organ dysfunction and failure in patients with AL amyloidosis. AL amyloidosis is a rare, progressive, and typically fatal disease where immunoglobulin light chain proteins produced by clonal plasma cells misfold, aggregate, and deposit as amyloid in vital organs. These toxic aggregates and amyloid deposits cause progressive damage and failure of vital organs, including the heart.

Birtamimab binds to both soluble and insoluble amyloid aggregates in multiple organs and promotes the clearance of amyloid deposits via phagocytosis. This depleter mechanism of action broadly targets misfolded kappa and lambda light chain to clear deposited amyloid that causes organ dysfunction and failure in patients with AL amyloidosis. Birtamimab is the only investigational therapeutic that has demonstrated a significant survival benefit within a randomized clinical trial in patients with Mayo Stage IV AL amyloidosis. Birtamimab has been granted Fast Track Designation by the U.S. Food and Drug Administration (FDA) for the treatment of Mayo Stage IV patients with AL amyloidosis to reduce the risk of mortality and has been granted Orphan Drug Designation by both the FDA and European Medicines Agency (EMA).

It is estimated that 200,000 to 400,000 patients globally suffer from this rare disease, with approximately 60,000 to 120,000 (or 30%) of those patients being categorized as Mayo Stage IV. Patients categorized at diagnosis as Mayo Stage IV have poor outcomes with current standard-of-care that aims to reduce the production of new protein but does not directly target and clear the toxic amyloid that deposits in organs. There are currently no approved treatments for AL amyloidosis that have demonstrated a survival benefit within randomized clinical trials, and there is an urgent unmet medical need for therapies that improve survival in patients at risk for early mortality due to amyloid deposition.

Confirmatory Phase 3 AFFIRM-AL Clinical Trial Design under SPA Agreement with FDA

Based on further analyses of data from the VITAL clinical trial and multiple in-depth discussions with the FDA, Prothena announced plans in February 2021, to advance birtamimab into the confirmatory Phase 3 AFFIRM-AL clinical trial in patients with Mayo Stage IV AL amyloidosis. AFFIRM-AL is a registration-enabling Phase 3 clinical trial that is being conducted with a primary endpoint of all-cause mortality at $p \leq 0.10$ under a Special Protocol Assessment (SPA) agreement with the FDA. Topline data from AFFIRM-AL is expected in 2024.

AFFIRM-AL is an ongoing global, multi-center, double-blind, placebo-controlled, 2:1 randomized, time-to-event clinical trial expected to enroll approximately 150 newly diagnosed, treatment naïve patients with AL amyloidosis categorized as Mayo Stage IV. It has been designed to evaluate the primary endpoint of all-cause mortality with a significance level of $p \leq 0.10$. Secondary endpoints will assess change from baseline to month 9 in quality of life as measured by SF-36v2 PCS and functional capacity as measured by 6MWT distance.

An interim analysis will be conducted when approximately 50% of the events have occurred, allowing the independent data monitoring committee to recommend either continuing the study or stopping early for overwhelming efficacy. Patients will receive 24 mg/kg of birtamimab or placebo by intravenous infusion every 28 days, with all patients receiving concurrent standard of care therapy consisting of a first line bortezomib-containing regimen.

Phase 3 VITAL Clinical Trial Results

In June 2023, we announced that results from the Phase 3 VITAL clinical trial were published in *Blood*, a journal of the American Society of Hematology (ASH). The published data demonstrate that in a post hoc analysis of patients with Mayo Stage IV AL amyloidosis, a statistically significant survival benefit of 74 percent was observed for those treated with birtamimab plus standard of care (SOC) versus 49 percent in patients on placebo plus SOC at 9 months (HR 0.413, p=0.021).

The article, entitled “Birtamimab plus standard of care in light chain amyloidosis: the phase 3 randomized placebo-controlled VITAL clinical trial”, also demonstrated that patients with Mayo Stage IV AL amyloidosis treated with birtamimab had statistically significant improvements over placebo in a post hoc assessment of two key secondary endpoints, quality of life (assessed with the Short Form-36 version 2 physical component score, SF-36v2 PCS) and cardiac function (assessed with the 6-minute walk test). Patients treated with birtamimab showed a slower decline in quality of life with a mean decrease of 0.75 in the SF-36v2 PCS at 9 months compared to a mean decrease of 5.40 in the SF-36v2 PCS for patients on placebo at 9 months (a mean difference of 4.65 favoring birtamimab; p=0.046). Patients treated with birtamimab after 9 months demonstrated an increase in mean distance of 15.22 meters in the 6-minute walk test, compared to a decrease in mean distance of 21.15 meters for patients on placebo (a mean difference of 36.37 meters favoring birtamimab; p=0.022).

Prasinezumab for the Potential Treatment of Parkinson's Disease and Other Synucleinopathies

Prasinezumab is an investigational humanized monoclonal antibody that targets alpha-synuclein, a protein found in neurons that can aggregate and spread from cell to cell, resulting in the neuronal dysfunction and loss that causes Parkinson's disease and other synucleinopathies. Prasinezumab is the focus of our worldwide collaboration with Roche.

Parkinson's disease is a progressive degenerative disorder of the central nervous system (CNS) that affects approximately one in 100 people over the age of 60, with incidence increasing based on an aging population. With an estimated 10 million people living with Parkinson's disease worldwide today, it is the most common neurodegenerative movement disorder and fastest growing neurological disorder. The disease is characterized by the neuronal accumulation of aggregated α-synuclein in the CNS and peripheral nervous system that results in a wide spectrum of worsening progressive motor and non-motor symptoms. While diagnosis currently relies on motor symptoms classically associated with Parkinson's disease, non-motor symptoms may present many years earlier. Current treatments for Parkinson's disease are symptomatic and only address a subset of symptoms such as motor impairment, dementia or psychosis. Symptomatic therapies do not target the underlying cause of the disease and as the disease progresses and dopaminergic neurons continue to be lost, these drugs lose effectiveness, often leading to debilitating side effects as the disease progresses. There are currently no treatments available that target the underlying cause of the disease. Prasinezumab is designed to block the cell-to-cell transmission of the aggregated, pathogenic forms of alpha-synuclein in Parkinson's disease, thereby slowing clinical decline. The goal of our approach is to slow the progressive neurodegenerative consequences of disease, a current unmet need.

Phase 2b PADOVA Study

A Phase 2b study (PADOVA) to further assess the efficacy of prasinezumab in an expanded patient population is being conducted by Roche. In the first quarter of 2023, Roche completed enrollment of the study.

PADOVA is a Phase 2b, randomized, double-blind, placebo-controlled, multicenter study to evaluate the efficacy and safety of prasinezumab in patients with early Parkinson's disease who are on stable symptomatic (levodopa) medication. The study intends to enroll 575 patients randomized to receive either prasinezumab or placebo via intravenous infusion every 4 weeks. The primary endpoint is time to meaningful progression on motor signs of the disease, as assessed by ≥5 point increase in Movement Disorder Society – Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III score from baseline. Topline data from PADOVA is expected in 2024.

Prasinezumab is the first anti-alpha synuclein antibody to advance into late-stage development. In March 2022, results from the analysis of part 2 of the Phase 2 PASADENA study of prasinezumab were presented in an oral presentation by Roche at the International Conference on Alzheimer's and Parkinson's Diseases ("AD/PD 2022"). Results showed that participants with Parkinson's disease who were treated with prasinezumab for two years (early-start group) showed slower decline of MDS-UPDRS Part III scores relative to participants treated with placebo in the first year and prasinezumab the second year (delayed-start group), further supporting a potential effect on delaying motor progression in patients.

NNC6019 (formerly PRX004) for the Potential Treatment of ATTR Amyloidosis

NNC6019 (formerly PRX004) is an investigational antibody designed to deplete amyloid associated with disease pathology in hereditary and wild type ATTR amyloidosis, without affecting the native, normal tetrameric form of the protein.

NNC6019's proposed mechanism of action is to deplete both circulating non-native TTR to prevent further deposition and deposited amyloid to improve organ function. NNC6019 has been shown in preclinical studies to inhibit amyloid fibril formation, neutralize soluble aggregate forms of non-native TTR, and promote clearance of insoluble amyloid fibrils through antibody-mediated phagocytosis. This differentiated depleter mechanism of action could be developed as a monotherapy approach to ATTR amyloidosis and might also complement existing therapeutic approaches which either stabilize or reduce production of the native TTR tetramer. Prothena completed a Phase 1 clinical trial with NNC6019 in patients with hereditary forms of ATTR, in which NNC6019 was found to be safe and well tolerated.

ATTR Amyloidosis Business Acquired by Novo Nordisk

In July 2021, we announced that we and Novo Nordisk entered into a definitive purchase agreement under which Novo Nordisk acquired Prothena's clinical stage antibody NNC6019 (formerly PRX004) and broader ATTR amyloidosis business.

Under the terms of the definitive purchase agreement, Novo Nordisk acquired our wholly-owned subsidiary and gained full worldwide rights to the intellectual property and related rights of our ATTR amyloidosis business and pipeline. The aggregate purchase price consists of an upfront payment and development and sales milestone payments totaling up to $1.23 billion. We have earned approximately $100 million to date, including a $40 million clinical milestone payment that we announced in November 2022.

A Phase 2 clinical trial of NNC6019 in patients with ATTR cardiomyopathy is being conducted by Novo Nordisk (NCT05442047). Topline data is expected in 2024.

BMS-986446 (formerly PRX005) for the Potential Treatment of Alzheimer's Disease

BMS-986446 is designed to be a best-in-class anti-tau antibody that specifically binds with high affinity the R1, R2, and R3 repeats within the microtubule binding region ("MTBR") of tau and targets both 3R and 4R tau isoforms. MTBR-tau has been shown in preclinical studies to be involved in the pathological spread of tau. Neurofibrillary tangles composed of misfolded tau proteins, along with amyloid beta plaques, are pathological hallmarks of Alzheimer's disease (AD). Cell-to-cell transmission of pathogenic extracellular tau and the accumulation of pathogenic tau also correlate with the progression of symptomatology and clinical decline in patients with AD. Recent publications suggest that during the course of AD progression, tau appears to spread throughout the brain via synaptically-connected pathways; this propagation of pathology is thought to be mediated by tau "seeds" containing the MTBR of tau. Additionally, it has been recently reported that the presence of MTBR fragments in cerebrospinal fluid correlate with dementia stages in and tau tangles in AD to a higher degree than fragments of other tau regions. In preclinical research, antibodies targeting this region of tau were superior in blocking tau uptake and neurotoxicity, which has been associated with efficacy in relevant animal models. In these preclinical models, BMS-986446 demonstrated significant reduction of intraneuronal tau pathology and progression protection against behavioral deficit in a tau transgenic mouse model and complete blockade of neuronal tau internalization in vitro.

In June 2021, we announced that BMS exercised its option under the global neuroscience research and development collaboration to enter into an exclusive U.S. license for BMS-986446. BMS paid Prothena $80.0 million for this option following the execution of a US License Agreement for BMS-986446 and transfer of the underlying license. In July 2023, we announced that BMS exercised its option to enter into an exclusive worldwide license for BMS-986446 and Prothena received the associated option exercise fee of $55 million in August 2023. All program updates going forward, including results from ongoing and any future BMS-986446 clinical trials, will be reported by BMS.

Phase 1 Clinical Trial

In January 2023, we reported results from the single ascending dose (SAD) portion of a first-in-human, placebo controlled, Phase 1 clinical trial of BMS-986446 in the treatment of Alzheimer's disease. In the SAD portion of the trial, 19 healthy volunteers were randomized in a 3:1 drug to placebo into a low, medium or high does. Trial participants received a single dose of PRX0005 or placebo intravenously (IV) and were followed for up to two months.

Full results of the SAD portion of the trial were presented at the Alzheimer's Association International Conference 2023 ("AAIC") in July 2023 in a poster presentation. All three dose level cohorts of BMS-986446 were generally safe and well tolerated, meeting the primary objective of the SAD portion of the trial. None of the treatment emergent adverse events (TEAE) were serious. No clinically relevant changes were observed in other safety parameters. BMS-986446 also met key pharmacokinetic (PK) and immunogenicity secondary endpoints. Plasma drug concentrations of BMS-986446 increased in a dose-proportional manner. Furthermore, BMS-986446 exposure in cerebrospinal fluid (CSF) was measured in the high dose cohort and based on the robust exposure of BMS-986446 in the CSF (day 29 CSF:Plasma ratio=0.2%), substantial target engagement is expected in the CNS. BMS-986446 had a desirable immunogenicity profile with no persistent BMS-986446 induced antidrug antibodies (ADAs) observed.

A multiple ascending dose (MAD) portion of the Phase 1 clinical trial is ongoing. In September 2023, BMS reported that Phase 1 data supports rapidly moving BMS-986446 into a Phase 2 clinical trial in first half of 2024. All program updates going forward, including results from ongoing and any future BMS-986446 clinical trials, will be reported by BMS.

Global Neuroscience Research and Development Collaboration with Bristol Myers Squibb

This global neuroscience research and development collaboration is focused on three proteins implicated in the pathogenesis of several neurodegenerative diseases, including tau, TDP-43, and an undisclosed target. BMS-986446 is designed to be a best-in-class anti-tau, MTBR-specific antibody for the potential treatment of AD and, with the initiation of the Phase 1 clinical trial, is the first program to advance to the clinic from this collaboration. After receiving the $55 million payment described above, we have received a total of $285 million pursuant to the collaboration and we are eligible to receive up to an additional $160 million for U.S. rights, up to $110 million for global rights, and up to $1.7 billion for regulatory and

commercial milestone payments for a total of up to $2.2 billion plus potential tiered commercial sales royalties across multiple programs.

PRX012 for the Potential Treatment of Alzheimer's Disease

PRX012 is an investigational antibody that targets Aβ, or Amyloid Beta, a protein implicated in AD. Our scientists have advanced the understanding of the biology of AD and made particularly impactful and fundamental discoveries that elucidated the role amyloid plays in the disease.

Monoclonal antibodies targeting key epitopes within the N-terminus of Aβ have demonstrated that reducing amyloid plaque burden is associated with the slowing of clinical decline in AD. To address the growing prevalence of AD with a therapeutic that can be made widely accessible to patients, we have developed highly potent anti-Aβ antibodies that retain or improve key attributes that are thought to underlie the observed efficacy of N-terminally directed therapeutics such as aducanumab, with the aim of offering similar or improved efficacy with convenient subcutaneous dosing regimens. In preclinical studies, our antibodies demonstrated a higher binding strength to amyloid than aducanumab; specifically, our lead candidate with an approximately 10-fold greater affinity/avidity for fibrillar Aβ than aducanumab that also neutralized soluble, toxic (i.e., oligomeric) Aβ species. Preclinical studies also showed that our antibodies recognize Aβ pathology to a greater extent than aducanumab, demonstrating more extensive plaque area binding at lower antibody concentrations, which are estimated to be clinically relevant exposures in the central nervous system following systemic dosing.

We are advancing our lead candidate, PRX012, as a next-generation approach for subcutaneous administration to improve access for patients with AD. In March 2022, we announced the FDA clearance of the IND for PRX012 and the initiation of a first-in-human Phase 1 single ascending dose (SAD) clinical trial to investigate the safety, tolerability, immunogenicity, and pharmacokinetics of PRX012 in both healthy volunteers and patients with AD. In April 2022, we announced that the FDA granted Fast Track designation for PRX012 for the treatment of AD. The FDA's Fast Track designation program is designed to expedite the development and review of drugs intended to treat a serious condition, such as AD, with evidence demonstrating the potential to address an unmet medical need.

In March 2023, we delivered an oral presentation at the 2023 International Conference on Alzheimer's and Parkinson's Diseases and related neurological disorders (AD/PD). To build a more in-depth understanding of PRX012's binding profile to Aβ protofibrils and its ability to clear pyroglutamate-Aβ from AD brain tissue, nonclinical studies compared a PRX012-surrogate (PRX012s) to approved and investigational molecules. Findings demonstrated that PRX012s had superior binding of 20-fold higher affinity to Aβ protofibrils as compared to lecanemab and mediated more robust phagocytic clearance of pyroglutamate-modified Aβ when compared to donanemab.

Both the SAD clinical trial and a Phase 1 multiple ascending dose clinical trial are currently ongoing. Initial topline data from both clinical trials is expected by year-end 2023.

Our Discovery and Preclinical Programs

We are also advancing several discovery and preclinical-stage programs for neurological diseases with significant unmet medical needs such as AD and amyotrophic lateral sclerosis (ALS). Our discovery and pre-clinical pipeline includes PRX123, our proprietary dual Aβ-tau vaccine program, as well as two programs (TDP-43 and an undisclosed target (PRX019)) that are the focus of our collaboration with BMS.

If promising, we expect to advance our discovery programs into preclinical development. New target discovery will focus on areas where we can bring potential new therapies to patients expeditiously through our internal expertise and resources. Existing late discovery-stage or preclinical-stage programs may be partnered or out-licensed.

PRX123, a Dual Aβ-Tau Vaccine for the Potential Treatment and Prevention of Alzheimer's Disease

We are developing a dual vaccine, PRX123, which concomitantly targets key epitopes within both the Aβ and tau proteins. Preclinical models suggest that Aβ and tau act synergistically in the development of Alzheimer's disease; however, the majority of vaccines and passive immunotherapies under development today target only one of these two pathological features.

PRX123 is being developed for the potential prevention and treatment of Alzheimer's disease. In preclinical studies, PRX123 has generated polyclonal responses against key epitopes within the N-terminal of Aβ and a key region of tau to promote amyloid clearance and blockade of tau transmission. Immunohistochemistry using sera from immunized animals

demonstrated an appropriate and balanced immune response with antibodies that react to both Aβ plaques and tau tangles at concentrations expected to be reached in CNS following immunization and resultant titer generation.

In July 2023, we presented preclinical results at AAIC 2023 that demonstrated that a PRX123 vaccine surrogate elicited robust antibody responses that bound with high avidity to Aβ plaques in Alzheimer's disease brain ex vivo and significantly reduced Aβ brain plaques in a transgenic mouse model of Alzheimer's disease pathology. Furthermore, in March 2022, we delivered an oral presentation at AD/PD 2022 on preclinical data demonstrating that PRX123 generated anti-Aβ and anti-tau antibodies to enable phagocytosis of Aβ and to neutralize tau. These findings provided proof of concept in multiple preclinical species. We expect an IND for PRX123 with the FDA by year-end 2023.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with the accounting principles generally accepted in the U.S. ("GAAP"). The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions for the reported amounts of assets, liabilities, revenues, expenses and related disclosures.

There were no significant changes to our critical accounting policies and estimates during the nine months ended September 30, 2023, from the critical accounting policies and estimates disclosed in Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2022 Form 10-K.

Recent Accounting Pronouncements

There have been no new accounting pronouncements or changes to accounting pronouncements during the nine months ended September 30, 2023, as compared to the recent accounting pronouncements described in our 2022 Form 10-K, that are of significance or potential significance to us.

Results of Operations

Comparison of three and nine months ended September 30, 2023, and 2022

Revenue

	Three Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Collaboration revenue	$ 84,866	$ 1,517	5,494 %
Total revenue	$ 84,866	$ 1,517	5,494 %

	Nine Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Collaboration revenue	$ 91,004	$ 3,932	2,214 %
Revenue from license and intellectual property	50	50	— %
Total revenue	$ 91,054	$ 3,982	2,187 %

Total revenue was $84.9 million and $1.5 million for the three months ended September 30, 2023 , and 2022, respectively, and $91.1 million and $4.0 million for the nine months ended September 30, 2023 and 2022, respectively.

Collaboration revenue includes revenue recognized under our Collaboration Agreement with BMS. Collaboration revenue from BMS was $84.9 million and $91.0 million for the three and nine months ended September 30, 2023 , respectively, and $1.5 million and $3.9 million for the three and nine months ended September 30, 2022, respectively. The increase in BMS c ollaboration revenue for the three and nine months ended September 30, 2023, compared to the same periods in the prior year was primarily due to $72.9 million recognized for the Tau Global License Agreement ($17.9 million of deferred revenue recognized for the Global Right and $55 million for the option exercise fee), $4.7 million under a Supply Agreement and higher

revenue recognized for the Tau US Development Services Obligation. See Note 7, “Significant Agreements” to the Condensed Consolidated Financial Statements regarding the Collaboration Agreement with BMS for more information.

License and intellectual property revenue for the nine months ended September 30, 2023, and 2022 included $50,000 in each period, respectively, in license fees recognized under the License Agreement entered into on March 1, 2020, between the Company's wholly owned subsidiary, Prothena Biosciences Limited, and F. Hoffmann-La Roche Ltd.

Operating Expenses

	Three Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Research and development	$ 57,913	$ 39,860	45 %
General and administrative	16,645	11,989	39 %
Total operating expenses	$ 74,558	$ 51,849	44 %

	Nine Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Research and development	$ 158,680	$ 98,691	61 %
General and administrative	44,895	36,776	22 %
Total operating expenses	$ 203,575	$ 135,467	50 %

Total operating expenses consist of R&D expenses, general and administrative (“G&A”) expenses. Our operating expenses were $74.6 million and $51.8 million for the three months ended September 30, 2023, and 2022, respectively, and $203.6 million and $135.5 million for the nine months ended September 30, 2023, and 2022, respectively.

Our research activities are aimed at developing new drug products. Our development activities involve the translation of our research into potential new drugs. Our R&D expenses primarily consist of personnel costs and related expenses, including share-based compensation and external costs associated with clinical activities and drug development related to our drug programs, including birtamimab, BMS-986446/PRX005, PRX012, PRX123 and preclinical activities related to our discovery programs.

Our G&A expenses primarily consist of personnel costs and related expenses, including share-based compensation and professional service expenses.

Research and Development Expenses

Our R&D expenses increased by $18.1 million or 45%, for the three months ended September 30, 2023, and increased by $60.0 million or 61% for the nine months ended September 30, 2023 compared to the same periods in the prior year. The increase for the three and nine months ended September 30, 2023, compared to the same periods in the prior year was primarily due to higher clinical trial expenses primarily related to the PRX012 and birtamimab programs, higher personnel related expenses (including share-based compensation), higher consulting expenses, offset in part by lower manufacturing expenses.

The following table sets forth the R&D expenses for our major programs (specifically, any active program with successful first dosing in a Phase 1 clinical trial, which were birtamimab, prasinezumab, NNC6019, BMS-986446/PRX005, PRX012 and other R&D expenses for the three and nine months ended September 30, 2023, and 2022, and the cumulative amounts to date (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,		Cumulative to Date
	2023	2022	2023	2022	
Birtamimab (NEOD001)[1]	$ 18,508	$ 13,853	$ 50,288	$ 38,352	$ 453,774
PRX002/RG7935[2]	$ 3	$ 56	$ 8	$ 209	$ 106,789
NNC6019 (PRX004)[1][3]	$ 22	$ 367	$ 63	$ 648	$ 79,863
BMS-986446/PRX005[1]	$ 1,826	$ 4,746	$ 9,858	$ 11,389	$ 57,158
PRX012[1]	$ 27,553	$ 13,754	$ 69,966	$ 28,667	$ 132,969
Other R&D[4]	$ 10,001	$ 7,084	$ 28,497	$ 19,426	
	$ 57,913	$ 39,860	$ 158,680	$ 98,691	

[1] *Cumulative R&D costs to date include the costs incurred from the date when the program was 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.*

[2] *Cumulative R&D costs to date for prasinezumab and related antibodies include the costs incurred from the date when the program was separately tracked in nonclinical development. Expenditures in the early discovery stage are not tracked by program and accordingly have been excluded from this cumulative amount. Through May 28, 2021, Prasinezumab costs include payments to Roche for our share of the development expenses incurred by Roche related to prasinezumab programs.*

[3] *On July 8, 2021, we sold shares of one of our wholly-owned subsidiaries to Novo Nordisk. In connection with the transaction, Novo Nordisk acquired our ATTR amyloidosis business, including the clinical stage antibody NNC6019 (PRX004). Expenses incurred in 2023 and 2022 relate to certain close out activities and transition services provided to Novo Nordisk.*

[4] *Other R&D is comprised primarily of preclinical development and discovery programs that have not progressed to first patient dosing in a Phase 1 clinical trial and close out costs for programs that we are no longer advancing.*

We continue to expect our R&D expenses to increase for the full year ended December 31, 2023 over the prior year, primarily due to increase in spending for clinical trials related to our active clinical trials and higher personnel costs including share-based compensation.

General and Administrative Expenses

Our G&A expenses increased by $4.7 million, or 39%, for the three months ended September 30, 2023 and increased by $8.1 million, or 22% for the nine months ended September 30, 2023 compared to the same periods in the prior year. The increase for the three and nine months ended September 30, 2023, compared to the prior year, was primarily due to higher personnel related expenses (including share-based compensation).

We continue to expect our G&A expenses to increase for the full year ended December 31, 2023 compared to the prior year, primarily related to higher personnel costs including share-based compensation.

Other Income (Expense)

	Three Months Ended September 30,		Percentage Change
	2023	2022	
	(Dollars in thousands)		
Interest income	8,522	1,913	345 %
Other income (expense), net	(15)	2	n/m
Total other income (expense), net	8,507	1,915	344 %

n/m = not meaningful

	Nine Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Interest income	22,912	2,605	780 %
Other expense, net	(253)	(70)	261 %
Total other income (expense), net	22,659	2,535	794 %

Interest income increased by $6.6 million, or 345%, for the three months ended September 30, 2023 and increased by $20.3 million, or 780%, for the nine months ended September 30, 2023 compared to the same periods in the prior year, primarily due to higher interest income from our cash and money market accounts resulting from higher interest rates and higher cash balances. Other expense, net for the three and nine months ended September 30, 2023 and 2022, was primarily foreign exchange losses from transactions with vendors denominated in Euros.

Provision for (benefit from) Income Taxes

	Three Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Benefit from income taxes	$ (3,092)	$ (2,653)	17 %

	Nine Months Ended September 30,		
	2023	2022	Percentage Change
	(Dollars in thousands)		
Benefit from income taxes	$ (10,310)	$ (5,652)	82 %

The benefit from income taxes increased by $0.4 million, or 17%, fo r the three months ended September 30, 2023, and increased $4.7 million, or 82% for the nine months ended September 30, 2023 compared to the same periods in the prior year. The increase in benefit from income taxes for the three and nine months ended September 30, 2023, compared to the same periods in the prior year, was primarily due to adjustments to deferred tax assets related to Section 174 R&D Capitalization and differences in our geographical mix of profits and losses before tax arising from changes to intra-group service agreements.

The tax provisions for all periods presented primarily reflect U.S. federal taxes associated with recurring profits attributable to intercompany services that our 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

	September 30, 2023	December 31, 2022
Working capital	$ 637,234	$ 668,951
Cash and cash equivalents	670,897	710,406
Total assets	746,920	758,035
Total liabilities	129,693	135,993
Total shareholders' equity	617,227	622,042

Working capital was $637.2 million as of September 30, 2023, a decrease of $31.7 million from working capital of $669.0 million as of December 31, 2022. This decrease in working capital during the nine months ended September 30, 2023 , was primarily attributable to cash use of $203.6 million for operating expenses (adjusted to exclude non-cash charges) offset in part by $55.0 million in cash from BMS related to global option exercise fee, net proceeds of approximately $20.7 million from

the underwriters partial exercise of their 30-day option to purchase additional ordinary shares as part of the December 2022 public offering, interest income on investments of $22.9 million, net proceeds received from stock option exercises of approximately $21.0 million and proceeds of approximately $3.0 million from issuances of ordinary shares pursuant to the December 2021 Distribution Agreement.

As of September 30, 2023, we had $670.9 million in cash and cash equivalents. 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. Additionally, in order to develop and obtain regulatory approval for our potential products 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, including pursuant to the December 2021 Distribution Agreement (See Note 8, “Shareholders’ Equity” to the Condensed Consolidated Financial Statements for more information). 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.

In managing our liquidity needs in Ireland, we do not rely on unrepatriated earnings as a source of funds. As of September 30, 2023, $207.0 million of our outstanding cash and cash equivalents related to U.S. operations are considered permanently reinvested. We do not intend to repatriate these funds. However, if these funds were repatriated back to Ireland, we would incur a withholding tax from the dividend distribution.

The adequacy of our cash resources depends on many assumptions, including assumptions with respect to our expenses. These assumptions 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 nonclinical 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; the costs of any in-licensing transactions; and the timing, receipt, and amount of revenues or royalties, if any, from any approved drug candidates.

Our cash and cash equivalents may also be potentially supplemented in the future by proceeds from our collaboration partners and milestone payments from Novo Nordisk. Pursuant to the Collaboration Agreement with Roche, we are eligible to receive payments for commercial and regulatory milestones and royalties on net sales of Collaboration Products. See Note 7, “Significant Agreements” to our Condensed Consolidated Financial Statements regarding the Roche License Agreement for more information. Pursuant to the Collaboration Agreement with BMS (formerly Celgene), we are eligible to receive payments for commercial and regulatory milestones and royalties on net sales of Collaboration Products. See Note 7, “Significant Agreements” to our Condensed Consolidated Financial Statements regarding the Collaboration Agreement with BMS for more information. Pursuant to the share purchase agreement with Novo Nordisk, we are eligible to receive development and sales milestone payments. See Note 7, “Significant Agreements” to our Condensed Consolidated Financial Statements regarding the Novo Nordisk Share Purchase Agreement for more information.

Cash Flows for the Nine Months Ended September 30, 2023 and 2022

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

	Nine Months Ended September 30,	
	2023	**2022**
Net cash used in operating activities	$ (82,868)	$ (103,845)
Net cash used in investing activities	(1,261)	(313)
Net cash provided by financing activities	44,620	20,692
Net decrease in cash, cash equivalents and restricted cash	$ (39,509)	$ (83,466)

Cash Used in Operating Activities

Net cash used in operating activities was $82.9 million for the nine months ended September 30, 2023, primarily due to use of $203.6 million for operating expense (adjusted to exclude non-cash charges of approximately $24.0 million) and cash paid for prepaid expenses, other current liabilities and operating lease payments offset in part by $55.0 million in cash from BMS related to Global option License fee and interest income of $22.9 million.

Net cash used in operating activities was $103.8 million for the nine months ended September 30, 2022, primarily due to use of $135.5 million for operating expense (adjusted to exclude non-cash charges of approximately $21.0 million).

Cash Used in Investing Activities

Net cash used in investing activities was $1.3 million and $0.3 million for the nine months ended September 30, 2023, and 2022, respectively. Net cash used in investing activities for the nine months ended September 30, 2023, and 2022, was primarily related to purchases of property and equipment.

Cash Provided by Financing Activities

Net cash provided by financing activities was $44.6 million for the nine months ended September 30, 2023, primarily from net proceeds of approximately $20.7 million from the underwriters partial exercise of their 30-day option to purchase additional ordinary shares as part of the December 2022 public offering, proceeds from issuances of ordinary shares upon exercises of stock options of $21.0 million and net proceeds of $3.0 million from issuances of ordinary shares pursuant to the December 2021 Distribution Agreement.

Net cash provided by financing activities was $20.7 million for the nine months ended September 30, 2022, primarily from net proceeds from issuances of ordinary shares pursuant to the December 2021 Distribution Agreement of $14.5 million and proceeds from issuances of ordinary shares upon exercises of stock options of $6.2 million.

Off-Balance Sheet Arrangements

At September 30, 2023, 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.

Contractual Obligations

Our contractual obligations as of September 30, 2023, consisted of minimum cash payments under operating leases of $16.5 million, purchase obligations of $14.6 million (of which $8.3 million is included in current liabilities), and contractual obligations under license agreements of $0.4 million (of which $15,000 is included in current liabilities). Purchase obligations consist of non-cancelable purchase commitments to suppliers. Operating leases represent our future minimum rental commitments under our non-cancelable operating leases. For additional information regarding the timing for our contractual obligations See Note 6, “Commitments and Contingencies” to our Condensed Consolidated Financial Statements.

In March 2016, we entered into a noncancelable operating sublease to lease 128,751 square feet of office and laboratory space in South San Francisco, California. We are obligated to make lease payments totaling approximately $39.2 million over the lease term. Of this obligation, approximately $1.7 million remains outstanding as of September 30, 2023. We sub-sublease approximately 46,641 square feet of the office and laboratory in South San Francisco, California to Assembly Biosciences, Inc. See Note 6, “Commitments and Contingencies” to our Condensed Consolidated Financial Statements for additional information regarding sub-sublease rental income.

In June 2021, we entered into a lease agreement for office space in Dublin, Ireland, which commenced in August 2021 and had an initial term of one year. In April 2023, the Company renewed the lease for another one year with a termination date of July 2024. In addition, the Company entered into a lease agreement for additional office space in Dublin, Ireland, which commenced in August 2023 and has an initial term of one year. Both of these leases have an automatic renewal clause, pursuant to which the agreement will be extended automatically for successive periods equal to the current term, unless the agreement is cancelled by us.

In October 2022, we entered into a noncancelable operating sublease to lease approximately 31,157 square feet of office and laboratory space in Brisbane, California. We are obligated to make lease payments totaling approximately $14.9 million over the lease term, which expires on September 30, 2028, unless terminated earlier. Of this obligation, approximately $14.7 million remains outstanding as of September 30, 2023.

The following is a summary of our contractual obligations as of September 30, 2023 (in thousands):

	Total	2023	2024	2025	2026	2027	Thereafter
Operating leases [1]	$ 16,543	$ 1,713	$ 2,828	$ 3,052	$ 3,158	$ 3,269	$ 2,523
Purchase obligations	14,584	14,426	122	36	—	—	—
Contractual obligations under license agreements	402	64	64	64	60	60	90
Total	$ 31,529	$ 16,203	$ 3,014	$ 3,152	$ 3,218	$ 3,329	$ 2,613

[1] *See Note 6,* "*Commitments and Contingencies*" *to our Condensed Consolidated Financial Statements.*

In addition to the contractual obligations above, we also expect to have future material cash requirements related to our clinical trials, discovery and pre-clinical programs, human capital and intellectual property. Assuming no significant change in our business, we continue to expect the full year 2023 net cash used in operating and investing activities to be approximately $148 million to $161 million.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business including the effects of changes in foreign currency exchange rates and interest rates. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates.

Foreign Currency Risk

Our business is primarily conducted in U.S. dollars except for its agreements with contract manufacturers for drug supplies which are denominated in Euros. We recorded a loss on foreign currency exchange rate differences of approximately $253,000 and $70,000 during the nine months ended September 30, 2023 and 2022, respectively. If we increase our business activities that require the use of foreign currencies, we may be exposed to 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. Our investments are subject to interest rate risk and could fluctuate in value 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 may invest any surplus funds in accordance with a policy approved by our board of directors. The primary objectives of our investment policy are to preserve principal and maintain proper liquidity to meet our operating requirements.

Credit Risk

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 multiple major and reputable financial institutions. To minimize our risk, the Company and its subsidiaries invest pursuant to an investment policy, which specifies credit quality standards for our investments and limits the amount of credit exposure to any single issue, issuer or type of investment. We perform periodic evaluations of the relative credit standing of financial institutions to ensure their credit worthiness. The majority of cash and cash equivalents are invested in liquid money market funds. Cash 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. Our credit risk exposure is up to the extent recorded on our Condensed Consolidated Balance Sheets.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer ("CEO") and chief financial officer ("CFO") evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of the end of the period covered by this Form 10-Q. Based on this evaluation, our CEO and CFO concluded that, as of September 30, 2023, 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.

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 third fiscal quarter ended September 30, 2023, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are not currently a party to any material legal proceedings. We may at times be party to ordinary routine litigation incidental to our business. When appropriate in management's estimation, we may record reserves in our financial statements for pending legal proceedings.

ITEM 1A. RISK FACTORS

Investing in our ordinary shares involves a high degree of risk. Our Annual Report on Form 10-K for 2022 (filed with the SEC on February 28, 2023) includes a detailed discussion of our business and the risks to our business. You should carefully read that Form 10-K. You should carefully consider the risks described below, together with all of the other information included in this Quarterly Report on Form 10-Q, in considering our business and prospects. If any of the following risks, other unknown risks, or risks that we think are immaterial occur, our business, financial condition, results of operations, cash flows, or growth prospects could be adversely impacted, in which case, the market price of our ordinary shares could decline, and you may lose all or part of your investment in our ordinary shares. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

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 incurred net income (lo sses) of $(79.6) million for the nine months ended September 30, 2023, and ($116.9) million, $67.0 million, and ($111.1) million for the years ended December 31, 2022, 2021 and 2020, respectively. As of September 30, 2023, we had an accumulated deficit of $912.6 million. We expect to continue to incur substantial losses for the foreseeable future as we:

- support the Phase 3 AFFIRM-AL clinical trial for birtamimab, the Phase 1 clinical trials for PRX012, and potential additional clinical trials for these and other programs;
- develop and possibly commercialize our drug candidates, including birtamimab, PRX012, and PRX123;
- undertake nonclinical development of other drug candidates and initiate clinical trials, if supported by nonclinical data;
- pursue our early stage research and seek to identify additional drug candidates; and
- potentially acquire rights from third parties to drug candidates or technologies through licenses, acquisitions, or other means.

We must generate significant revenue to achieve and maintain 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 achieve or 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 September 30, 2023, we had cash and cash equivalents of $670.9 million. The majority of such cash is held in accounts at U.S. banking institutions that we believe are of high quality. Cash held in depository accounts may exceed the $250,000 Federal Deposit Insurance Corporation insurance limits. If such banking institutions were to fail, we could lose all or a portion of those amounts held in excess of such insurance limitations. 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 order to continue the research and development, and eventual commercialization, 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 progress, results, and costs of our clinical trials, including the Phase 3 clinical trial for birtamimab, the Phase 2 clinical trial for prasinezumab being conducted by Roche, the Phase 2b clinical trial for prasinezumab being conducted by Roche, the Phase 2 clinical trial for NNC6019 (formerly PRX004) being conducted by Novo Nordisk, the Phase 1 clinical trial for BMS-986446/PRX005 being conducted by BMS, and the Phase 1 clinical trials for PRX012;

- the timing, initiation, progress, results, and costs of these and our other research, development, and possible commercialization activities;
- the results of our research, nonclinical studies, and clinical trials;
- the costs of manufacturing our drug candidates for clinical development as well as for future commercialization needs;
- if and when appropriate, the costs of preparing for commercialization of our drug candidates;
- the costs of preparing, filing, and prosecuting patent applications, and maintaining, enforcing, and defending intellectual property-related claims;
- our ability to establish strategic collaborations, licensing, or other arrangements;
- the timing, receipt, and amount of any capital investments, cost-sharing contributions or reimbursements, milestone payments, or royalties that we might receive under current or potential future collaborations;
- 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.

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 drug candidates, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the development and commercialization of our current drug candidates.

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 substantial risk that drug 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 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 drug 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. Our ability to raise additional capital, including our ability to secure new collaborations, may also be adversely impacted by global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic and geopolitical turmoil, including the Russian invasion of Ukraine and ongoing conflict in Israel. We cannot assure that additional funds will be available when we need them on terms that are acceptable to us or at all. If we raise additional funds by issuing equity securities, including pursuant to our December 2021 Distribution Agreement, 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 activities 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.

The United Kingdom's withdrawal from the European Union could have a negative effect on global economic conditions and financial markets, European Union regulatory procedures and our business.

Following a national referendum and enactment of legislation by the government of the United Kingdom, the United Kingdom formally withdrew from the European Union ("EU") on January 31, 2020, commonly referred to as Brexit. The United Kingdom remained in the EU customs union and the single market for a transition period which expired on December 31, 2020. On December 24, 2020, the United Kingdom and the EU reached agreement in principle on their future trading relationship and entered into the EU-UK Trade and Cooperation Agreement which was formally ratified by the parties and as of May 1, 2021, is fully in force. However, because the agreement merely sets forth a framework in many respects and will require complex additional bilateral negotiations between the United Kingdom and the EU as both parties continue to work on the rules for implementation, significant political and economic uncertainty remains as to aspects of the future relationship between the United Kingdom and the EU. The uncertainty surrounding Brexit has had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets. Any of these factors could depress economic activity and restrict access to capital, which could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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. Gene G. Kinney, our President and Chief Executive Officer. There can be no assurance that we will be able to retain Dr. Kinney or any of our key personnel. The loss of the services of Dr. Kinney or any other person on whom we are highly dependent might impede the achievement of our research, development, and commercial objectives. We do not carry "key person" insurance covering any members of our senior management.

Attracting and retaining qualified scientific and other personnel are critical to our growth and future success. Competition for qualified personnel in our industry is intense. We may not be able to attract and retain these personnel on acceptable terms given that competition. Additionally, we may not be able to integrate and motivate qualified personnel to enable them to succeed in their positions. Failure to attract, integrate, retain, and motivate qualified personnel could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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

We entered into certain agreements with Elan in connection with our separation from Elan, which set forth the main terms of the separation and provided 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 Company plc ("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 may be less willing to collaborate with us in connection with the agreements to which we and Elan are a party and other matters.

We may be adversely affected by earthquakes, natural disasters, and adverse weather events, including as a result of climate change.

Our key facility and most of our operations are in the San Francisco Bay Area of Northern California, which in the past has experienced severe earthquakes. If an earthquake, other natural disaster, or similar event were to occur and prevent us from using all or a significant portion of those operations or local critical infrastructure, or that otherwise disrupts our operations, it could be difficult or impossible for us to continue our business for a substantial period of time. We have disaster recovery and business continuity plans, but they may prove to be inadequate in the event of a natural disaster or similar event. We may incur substantial expenses if our disaster recovery and business continuity plans prove to be inadequate. We do not carry earthquake insurance. Furthermore, third parties upon which we are materially dependent upon may be vulnerable to natural disasters or similar events. Climate change could have an impact on longer-term natural weather trends. Extreme weather events that are

linked to rising temperatures, changing global weather patterns, sea, land and air temperatures, as well as sea levels, rain and snow could result in increased occurrence and severity of adverse weather events. Any such adverse weather event, natural disaster or similar occurrence could have an adverse effect on our business, financial condition, or results of operations.

We may experience breaches or similar disruptions of our information technology systems or data.

Our business is increasingly dependent on critical, complex, and interdependent information technology systems to support business processes as well as internal and external communications. Despite the implementation of security measures, our internal computer systems, and those of our current and any future CROs and other contractors, consultants, and collaborators, have been subject to and remain vulnerable to damage from cyberattacks, "phishing" attacks, ransomware, computer viruses, unauthorized access, natural disasters, terrorism, war, and telecommunication or electrical failures. Attacks upon information technology systems are increasing in their frequency, levels of persistence, sophistication, and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives and expertise. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the techniques used to obtain unauthorized access to or to sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. Any breakdown, malicious intrusion, or computer virus could result in the impairment of key business processes or breach of data security, which could result in a material disruption of our development programs and cause interruptions in our business operations, whether due to a loss of our trade secrets or other intellectual property or lead to unauthorized disclosure of personal data of our employees, third parties with which we do business, clinical trial participants, or others. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. In addition, such a breach may require notification to governmental agencies, the media, or individuals pursuant to applicable data privacy and security law and regulations. Such an event could have an adverse effect on our business, financial condition, or results of operations.

Changes in and failures to comply with U.S. and foreign privacy and data protection laws, regulations, and standards may adversely affect our business, operations, and financial performance.

We and our partners may be subject to federal, state, and foreign data privacy and security laws and regulations. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues, which may affect our business and may increase our compliance costs and exposure to liability. In the United States, numerous federal and state laws and regulations, including state security breach notification laws, federal and state health information privacy laws (including U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act, and regulations promulgated thereunder), and federal and state consumer protection laws, govern the collection, use, disclosure, and protection of personal information. Each of these laws is subject to varying interpretations by courts and government agencies, creating complex compliance issues. For example, the California Consumer Privacy Act (the "CCPA") went into effect January 1, 2020. The CCPA, among other things, imposes new data privacy obligations on covered companies and provides expanded privacy rights to California residents, including the right to access, delete, and opt out of certain disclosures of their information. The CCPA provides for civil penalties for violations, as well as a private right of action with statutory damages for certain data breaches, which may increase the frequency and likelihood of data breach litigation. Although the law includes limited exceptions for health-related information, including clinical trial data, such exceptions may not apply to all of our operations and processing activities. Further, the California Privacy Rights Act (the "CPRA") imposes additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It also creates a California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions went into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. In addition, the CCPA has prompted a number of proposals for new federal and state privacy legislation that, if passed, could increase our potential liability, increase our compliance costs and adversely affect our business. If we fail to comply with applicable laws and regulations we could be subject to penalties or sanctions, including criminal penalties if we knowingly obtain or disclose individually identifiable health information from a covered entity in a manner that is not authorized or permitted by HIPAA or applicable state laws.

We are also or may become subject to rapidly evolving data protection laws, rules, and regulations in foreign jurisdictions. For example, the European Union General Data Protection Regulation (the "EU GDPR") governs the collection of, and other processing activities involving, personal data (i.e., data which identifies an individual or from which an individual is identifiable) including, clinical trial data, and grants individuals various data protection rights (e.g., the right to erasure of personal data). The EU GDPR imposes a number of obligations on companies, including inter alia: (i) accountability and

transparency requirements, and enhanced requirements for obtaining valid consent; (ii) obligations to consider data protection as any new products or services are developed and to limit the amount of personal data processed; and (iii) obligations to implement appropriate technical and organizational measures to safeguard personal data and to report certain personal data breaches to the supervisory authority without undue delay (and no later than 72 hours where feasible). In addition, the EU GDPR prohibits the transfer of personal data from the European Economic Area ("EEA") to the United States and other jurisdictions that the European Commission does not recognize as having "adequate" data protection laws unless a data transfer mechanism has been put in place. In July 2020, the Court of Justice of the European Union limited how organizations could lawfully transfer personal data from the EEA to the United States by invalidating the EU-US Privacy Shield for purposes of international transfers and imposing further restrictions on the use of standard contractual clauses ("SCCs") including, a requirement for companies to carry out a transfer privacy impact assessment, which among other things, assesses the laws governing access to personal data in the recipient country and considers whether supplementary measures that provide privacy protections additional to those provided under the SCCs will need to be implemented to ensure an essentially equivalent level of data protection to that afforded in the EEA. The EU GDPR imposes substantial fines for breaches and violations (up to the greater of €20 million or 4% of our annual global revenue). The EU GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the EU GDPR. Relatedly, following the United Kingdom's withdrawal from the EU (i.e., Brexit), and the expiry of the Brexit transition period, which ended on December 31, 2020, the EU GDPR has been implemented in the United Kingdom (as the "UK GDPR"). The UK GDPR sits alongside the UK Data Protection Act 2018 which implements certain derogations in the EU GDPR into UK law. Under the UK GDPR, companies not established in the UK but who process personal data in relation to the offering of goods or services to individuals in the UK, or to monitor their behavior will be subject to the UK GDPR – the requirements of which are (at this time) largely aligned with those under the EU GDPR and as such, may lead to similar compliance and operational costs with potential fines up to the greater of £17.5 million or 4% of global turnover. The above-described changes lead to additional costs and increase our overall risk exposure.

Compliance with U.S. and foreign data privacy and security laws, rules, and regulations could require us to take on more onerous obligations in our contracts, require us to engage in costly compliance exercises, restrict our ability to collect, use and disclose data, or in some cases, impact our or our partners' or suppliers' ability to operate in certain jurisdictions. Each of these constantly evolving laws can be subject to varying interpretations. If we fail to comply with any such laws, rules, or regulations, we may face government investigations and/or enforcement actions, fines, civil or criminal penalties, private litigation, or adverse publicity that could adversely affect our business, financial condition, and results of operations.

The COVID-19 pandemic has adversely affected our business and could have a material adverse effect on our liquidity, results of operations, financial condition or business, including our nonclinical and clinical development programs.

The outbreak of the novel strain of coronavirus SARS-CoV-2, which causes coronavirus disease ("COVID-19"), continues to be a global pandemic. While it is not possible at this time to estimate the overall impact that COVID-19 could have on our business, the continued rapid spread of COVID-19, the emergence of variant strains, and the measures taken by the governments and local authorities of affected countries and local jurisdictions, has disrupted our Phase 2 clinical trial for prasinezumab, has delayed initiating clinical trial sites for our Phase 3 clinical trial for birtamimab, and could disrupt and delay our planned clinical trials, our research and nonclinical studies, the manufacture or shipment of both drug substance and finished drug product for our drug candidates for preclinical testing and clinical trials and materially adversely impact our liquidity, results of operations, financial condition, or business, including the following:

- our Phase 2 clinical trial for prasinezumab has been disrupted and this and other clinical trials pursued by us and our collaboration partners may be further delayed or interrupted, including as a result of (i) interruptions of supply to clinical trial sites of drug candidate or other equipment or materials, (ii) inability or unwillingness of site investigators or other study personnel to travel to study sites, dispense drug product, or otherwise treat or monitor study participants or follow study protocols, or conduct necessary data collection or verification, (iii) inability or unwillingness of study participants to travel to clinical trial sites, receive infusions, or otherwise continue to participate in the study, (iv) diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials, or (v) interruptions in contracting with essential third-party vendors;
- initiation of clinical trial sites for our Phase 3 clinical trial for birtamimab has been delayed and we, or our collaboration partners, may be further delayed in or prevented from initiating new clinical trials of current or prospective drug candidates because of (i) delays or difficulties in manufacturing drug product, (ii) delays or difficulties preparing regulatory submissions, (iii) delays or difficulties contracting with essential third-party vendors (such as contract research organizations), (iv) delays or difficulties enlisting site investigators or initiating clinical trial sites, (v) delays or difficulties recruiting or enrolling study participants, or (vi) delays or difficulties supplying drug product or other equipment or materials to clinical trial sites or other locations;

- we may experience delays or interruptions in our business operations due to our key personnel, or a significant number of our personnel, becoming infected with COVID-19 and therefore being unable to work, even remotely, for an extended period of time;
- interruption or delays in the operations of the FDA and comparable foreign regulatory agencies may impact review, inspection, and approval timelines for any of our development programs;
- the pandemic may adversely affect our collaboration partners, Roche, BMS, and/or Novo Nordisk, in ways that adversely impacts our collaborations with them;
- business development opportunities may become more limited or difficult to undertake;
- our costs may significantly increase to manage impacts to our business to complete our planned operations within our projected timelines;
- changes in local regulations as part of a response to COVID-19 may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or discontinuation of the clinical trials altogether;
- we may experience delays in necessary interactions with local regulators, ethics committees, and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees; or
- our liquidity needs may be adversely impacted by the economic effects of the pandemic on financial markets.

Any one or more of these risks could have a material adverse effect on our liquidity, results of operations, financial condition or business, including the progress of, and timelines for, our nonclinical and clinical development programs.

In addition, the spread of COVID-19 has caused a broad impact globally, and may materially affect us economically. For example, if the subtenant to the office space that we subleased in South San Francisco, California defaults on its payment obligations, we will not receive sublease income to offset our lease payments to the landlord of the South San Francisco office space until such time as we are able to secure a new subtenant and enter into a new sublease agreement. The spread of COVID-19 has had a negative impact on the commercial real estate market and there can be no assurance that we would be able to re-sublet the space for the same rent that the current subtenant is obligated to pay us or at all.

While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, a widespread pandemic could result in significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the market price of our ordinary shares.

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. Our drug candidates are in various 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, which can result from the failure of the drug candidate to be sufficiently effective, the safety profile of the drug candidate, a clinical trial that is not sufficiently enrolled or powered or adequately designed to detect a drug effect, or other reasons. We intend to continue to invest most of our time and financial resources in our research and development programs.

There is no assurance that the results of the Phase 3 clinical trial for birtamimab, the Phase 2 clinical trial for prasinezumab, the Phase 2b clinical trial for prasinezumab, the Phase 2 clinical trial for NNC6019, the Phase 1 clinical trial for BMS-986446/PRX005, and the Phase 1 clinical trials for PRX012 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 that the drug candidate is safe and effective for use for that target indication. In the U.S., this must be done to the satisfaction of the FDA; in the EU, this must be

done to the satisfaction of the European Medicines Agency (the "EMA"); and in other countries this must be done to the satisfaction of comparable regulatory authorities.

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 treatment options;
- be proven safe and effective in clinical trials; or
- meet applicable regulatory standards.

Positive results in nonclinical 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 nonclinical studies and early clinical trials for our drug candidates may not be predictive of the results we may obtain in later stage studies or trials. Our nonclinical studies or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional nonclinical 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 any drug candidates that obtain regulatory approval. Successful commercialization may require:

- obtaining and maintaining commercial manufacturing arrangements with third-party manufacturers;
- developing the marketing and sales capabilities, internal and/or in collaboration with pharmaceutical companies or contract sales organizations, to market and sell any approved drug; and
- acceptance of any approved drug in the medical community and by patients and third-party payers.

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.

We have entered into collaborations with Roche and BMS and may enter into additional collaborations in the future, and we might not realize the anticipated benefits of such collaborations.

Research, development, commercialization and/or strategic collaborations, including those that we have with Roche and BMS, are subject to numerous risks, which include the following:

- collaborators may have significant control or discretion in determining the efforts and resources that they will apply to a collaboration, and might not commit sufficient efforts and resources or might misapply those efforts and resources;
- we may have limited influence or control over the approaches to research, development, and/or commercialization of products candidates in the territories in which our collaboration partners lead research, development, and/or commercialization;
- collaborators might not pursue research, development, and/or commercialization of collaboration drug candidates or might elect not to continue or renew research, development, and/or commercialization programs based on nonclinical and/or clinical trial results, changes in their strategic focus due to the acquisition of competing products, availability of funding, or other factors, such as a business combination that diverts resources or creates competing priorities;
- collaborators might delay, provide insufficient resources to, or modify or stop research or clinical development for collaboration drug candidates or require a new formulation of a drug candidate for clinical testing;
- collaborators could develop or acquire products outside of the collaboration that compete directly or indirectly with our drug candidates or require a new formulation of a drug candidate for nonclinical and/or clinical testing;
- collaborators with sales, marketing, and distribution rights to one or more drug candidates might not commit sufficient resources to sales, marketing, and distribution or might otherwise fail to successfully commercialize those drug candidates;

- collaborators might not properly maintain or defend our intellectual property rights or might use our intellectual property improperly or in a way that jeopardizes our intellectual property or exposes us to potential liability;
- collaboration activities might result in the collaborator having intellectual property covering our activities or drug candidates, which could limit our rights or ability to research, develop, and/or commercialize our drug candidates;
- collaborators might not be in compliance with laws applicable to their activities under the collaboration, which could impact the collaboration or us;
- disputes might arise between us and a collaborator that could cause a delay or termination of the collaboration or result in costly litigation that diverts management attention and resources; and
- collaborations might be terminated, which could result in a need for additional capital to pursue further research, development, and/or commercialization of our drug candidates.

In addition, funding provided by a collaborator might not be sufficient to advance drug candidates under the collaboration.

If a collaborator terminates a collaboration or a program under a collaboration, including by failing to exercise a license or other option under the collaboration, whether because we fail to meet a milestone or otherwise, any potential revenue from the collaboration would be significantly reduced or eliminated. In addition, we will likely need to either secure other funding to advance research, development, and/or commercialization of the relevant drug candidate or abandon that program, the development of the relevant drug candidate could be significantly delayed, and our cash expenditures could increase significantly if we are to continue research, development, and/or commercialization of the relevant drug candidates.

Any one or more of these risks, if realized, could reduce or eliminate future revenue from drug candidates under our collaborations, and could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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, if at all, which would require us to incur additional costs and delay or prevent our receipt of any revenue from potential product sales.

We cannot predict whether we will encounter problems with the Phase 3 clinical trial for birtamimab, the Phase 2 clinical trial for prasinezumab, the Phase 2b clinical trial for prasinezumab, the Phase 2 clinical trial for NNC6019, the Phase 1 clinical trial for BMS-986446/PRX005, the Phase 1 clinical trials for PRX012, or any other future clinical trials that will cause us or any regulatory authority to delay, suspend or terminate 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 ongoing or 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, the EMA, or other comparable regulatory authorities regarding the scope or design of our clinical trials;
- delays in obtaining, or our inability to obtain, required approvals from institutional review boards (“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 authority authorization for the conduct of our clinical trials;
- lower than anticipated enrollment and/or retention rate of subjects in our clinical trials, which can be impacted by a number of factors, including size of patient population, design of trial protocol, trial length, eligibility criteria, perceived risks and benefits of the drug candidate, patient proximity to trial sites, patient referral practices of physicians, availability of other treatments for the relevant disease, and competition from other clinical trials;
- slower than expected rates of events in trials with a composite primary endpoint that is event-based;
- serious and unexpected drug-related side effects experienced by subjects in clinical trials; or
- failure of our third-party contractors and collaborators to meet their contractual obligations to us or otherwise meet their development or other objectives in a timely manner.

Further, conducting clinical trials in foreign countries, as we do and may continue do for our drug candidates, presents potential additional risks for our clinical trials. These risks include the failure in foreign countries to adhere to clinical protocol as a result of differences in regional or local healthcare services or customs, obtaining clinical data and/or clinical samples from

sites in such foreign countries, managing additional administrative burdens associated with foreign regulatory requirements, as well as political and economic risks relevant to such foreign countries.

We are dependent upon Roche with respect to further development of prasinezumab. Under the terms of our collaboration with Roche, Roche is responsible for that further development, including the conduct of the ongoing Phase 2 and Phase 2b clinical trials and any future clinical trial of that drug candidate.

We are dependent upon Novo Nordisk with respect to further developme nt of NNC6019, includin g the Phase 2 clinical trial and any future clinical trial of that drug candidate.

We are dependent upon BMS with respect to further developme nt of BMS-986446/PRX005, including the Phase 1 clinical trial and any future clinical trial of that drug candidate.

Clinical trials may also be delayed or terminated as a result of ambiguous or negative data or results. In addition, a clinical trial may be delayed, suspended or terminated by us, the FDA, the EMA or other comparable regulatory authorities, the IRBs at the sites where the IRBs are overseeing a trial, or the safety oversight committee overseeing the clinical trial at issue 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, the EMA, or other regulatory authorities resulting in the imposition of a clinical hold on or imposition of additional conditions for the conduct of the trial;
- interpretation of data by the FDA, the EMA, or other regulatory authorities;
- requirement by the FDA, the EMA, or other regulatory authorities to perform additional studies;
- failure to achieve primary or secondary endpoints or other failure to demonstrate efficacy or adequate safety;
- 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 delayed or harmed and our ability to generate product revenues will be delayed or 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, the EMA, and other comparable regulatory 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, the EMA, and other comparable regulatory 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, the EMA, or comparable regulatory authorities may disagree with the design, implementation, or conduct of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA, the EMA, or comparable 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, the EMA, or comparable 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, the EMA, or comparable regulatory authorities may disagree with our interpretation of data from nonclinical studies or clinical trials;
- the data collected from clinical trials of our drug candidates may not be sufficient to support the submission of an NDA or a BLA to the FDA, a Marketing Authorization Application ("MAA") to the EMA, or similar applications to comparable regulatory authorities;
- the FDA, the EMA, or comparable 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, the EMA, or comparable 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/or growth prospects.

Separately, in response to the COVID-19 pandemic, on March 10, 2020, the FDA announced its intention to postpone most inspections of foreign manufacturing facilities and products through April 2020, and on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. In May 2021, the FDA updated its guidance, first published in August 2020, clarifying how it intends to conduct inspections during the COVID-19 pandemic, including how it plans to determine which inspections are "mission critical." The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission critical inspections to resumption of all regulatory activities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic, including providing guidance regarding the conduct of clinical trials. If global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, or impact reviews or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

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 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.

The FDA or other comparable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.

We are and may choose to conduct international clinical trials in the future. The acceptance of study data by the FDA or other comparable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions. In cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (1) the data are applicable to the United States population and United States medical practice; (2) the trials are performed by clinical investigators of recognized competence; and (3) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such an inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any other comparable foreign regulatory authority will accept data from trials conducted outside of its applicable jurisdiction. If the FDA or any other comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval for commercialization in the applicable jurisdiction.

Even if our drug candidates receive regulatory approval in one country or jurisdiction, we may never receive approval or commercialize our products in other countries or jurisdictions.

In order to market drug candidates in a particular country or jurisdiction, we must establish and comply with numerous and varying regulatory requirements of that country or jurisdiction, including with respect to 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, for example, FDA approval in the

U.S. or EMA approval in the EU. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in the U.S. and EMA approval in the EU as well as other risks. Regulatory approval in one country or jurisdiction does not ensure regulatory approval in another country or jurisdiction, 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 one country or jurisdiction or any delay or setback in obtaining such approval would impair our ability to develop other markets for that drug candidate.

Although we have obtained agreement with the FDA on a special protocol assessment ("SPA") with regard to our Phase 3 AFFIRM-AL clinical trial of birtamimab, an SPA does not guarantee approval of birtamimab or any other particular outcome from regulatory review.

On January 27, 2021, the FDA agreed to an SPA for our Phase 3 AFFIRM-AL clinical trial of birtamimab. The FDA's SPA process is designed to facilitate the FDA's review and approval of drugs by allowing the FDA to evaluate proposed critical design features of certain clinical trials that are intended to form the primary basis for determining a drug candidate's efficacy and safety. Upon specific request by a clinical trial sponsor, the FDA will evaluate the study protocol and statistical analysis plan and respond to a sponsor's questions regarding protocol design and scientific and regulatory requirements. FDA aims to complete SPA reviews within 45 days of receipt of the request. The FDA ultimately assesses whether specific elements of the protocol design for the trial, such as entry criteria, endpoints, size, duration, and planned analyses, are acceptable to support an application for regulatory approval of the drug candidate with respect to the effectiveness of and safety for the indication studied. All agreements and disagreements between the FDA and the sponsor regarding a SPA must be clearly documented in an SPA letter or the minutes of a meeting between the sponsor and the FDA.

Although the FDA has agreed to the SPA for our Phase 3 AFFIRM-AL clinical trial with respect to the primary endpoint and certain other aspects of the clinical trial, a SPA agreement does not guarantee approval of a drug candidate. The FDA may limit the scope of its agreement to an SPA agreement to certain, specific aspects of the clinical trial design. Even if the FDA agrees to the design, execution, and analysis proposed in a protocol reviewed under the SPA process, the FDA may revoke or alter its agreement in certain circumstances. In particular, a SPA agreement is not binding on the FDA if public health concerns emerge that were unrecognized at the time of the SPA agreement, other new scientific concerns regarding product safety or efficacy arise, the sponsor fails to comply with the agreed upon study protocol, or the relevant data, assumptions, or information provided by the sponsor in a request for the SPA change or are found to be false or to omit relevant facts. In addition, even after a SPA agreement is finalized, the SPA agreement may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if the FDA and the sponsor agree in writing to the modification of the study protocol and/or statistical analysis plan. Generally, such modification is intended to improve the study. The FDA retains significant latitude and discretion in interpreting the terms of the SPA agreement and the data and results from any study that is the subject of the SPA agreement.

Moreover, if the FDA revokes or alters its agreement under the SPA, or interprets the data collected from the clinical trial differently than the sponsor, the FDA may not deem the data sufficient to support an application for regulatory approval.

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, adverse event reporting, manufacturing, labeling, packaging, storage, distribution, advertising, promotion, record keeping, and reporting related to the product are subject to extensive, ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, as well as continued compliance with current good manufacturing practice ("cGMP") requirements and current good clinical practice ("cGCP") requirements for any clinical trials that we conduct. 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 4 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 not previously observed in clinical trials, or problems with our third-party manufacturers or manufacturing processes, or failure to comply with the regulatory requirements of the FDA, the EMA, or other comparable 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 policies of the FDA, the EMA, or other comparable regulatory authority 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, if they are approved by applicable regulatory authorities, after they are 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, the EMA, or other comparable regulatory authorities. Drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete a trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects 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 or severity 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 contraindications, warnings, or precautions; or impose additional safety monitoring or reporting requirements;
- we may be required to change the way the product is administered, or to conduct additional clinical trials;
- 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 U.S. federal, state, local, and other countries' and jurisdictions' 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 payers, 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, frequency, and severity of adverse side effects;
- availability of coverage and adequate reimbursement from managed care plans and other third-party payers;
- 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 prasinezumab in the United States, if approved, will be 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 develop and commercialize prasinezumab and our business. Furthermore, in May 2021, we opted out of profit and loss sharing with Roche for prasinezumab in Parkinson's disease; however if we opt out of profit and loss sharing for any other Licensed Products and/or indications, our revenues from such other Licensed Products and/or indications will be reduced.

The success of sales of prasinezumab in the U.S. will be dependent on the ability of Roche to successfully develop in collaboration with us, and launch and commercialize prasinezumab, if approved by the FDA, pursuant to the License Agreement we entered into in December 2013. Our collaboration with Roche is complex, particularly with respect to future U.S. commercialization of prasinezumab, 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 development and commercialization of prasinezumab 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 prasinezumab in the U.S. In addition, Roche may under some circumstances independently develop products that compete with prasinezumab, or Roche may decide to not commit sufficient resources to the development, commercialization, marketing and distribution of prasinezumab. If we are not able to collaborate effectively with Roche on plans and efforts to develop and commercialize prasinezumab, 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, even if prasinezumab was approved by the FDA, Roche may determine that the outcomes of clinical trials made prasinezumab 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 prasinezumab could be substantially harmed as we will be required to develop, commercialize, and build our own sales and marketing organization, or enter into another strategic collaboration in order to develop and commercialize prasinezumab 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 prasinezumab, if approved by the FDA, including the timing of launch and potential pricing, will have a significant impact on the ultimate success of prasinezumab in the U.S., and the success of the overall commercial arrangement with Roche. If launch of commercial sales of prasinezumab 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 prasinezumab 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 U.S. could also have a negative effect on investors' perception of potential sales of prasinezumab outside of the U.S., which could also cause a decline in our stock price.

In May 2021, we opted out of profit and loss sharing with Roche for prasinezumab in Parkinson's disease. However, pursuant to the License Agreement, we are responsible for 30% of all development and commercialization costs for any future Licensed Products and/or indications (other than Parkinson's disease with prasinezumab) 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 such other Licensed Products and/or indications will be reduced.

Our right to co-develop Licensed Products and/or indications under the License Agreement (other than Parkinson's disease with prasinezumab for which we have opted out of co-development) 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 prasinezumab and other Licensed Products will terminate if we commence a Phase 3 study for a competitive product that treats Parkinson's disease.

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 prasinezumab will be dependent on Roche's efforts and may result in lower levels of income than if we marketed or developed our drug candidates entirely on our own. Roche may not fulfill its obligations or carry out marketing activities for prasinezumab as diligently as we would like. We could also become involved in disputes with Roche, which could lead to delays in or termination of development or commercialization activities 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, commercializing, or marketing prasinezumab 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 develop and, if prasinezumab is approved by applicable regulatory authorities, commercialize prasinezumab. If Roche's efforts are unsuccessful, our ability to generate future product sales from prasinezumab outside the United States would be significantly reduced.

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

In the event that Roche does not diligently develop and commercialize prasinezumab, 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 prasinezumab, including inside the U.S., 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 develop and commercialize prasinezumab 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 drug candidate. Furthermore, if Roche does not successfully develop and commercialize prasinezumab outside of the U.S., our potential to generate future revenue outside of the U.S. 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 a fully-scaled organization for the sales, marketing, and distribution of pharmaceutical products. In order to market any products that may be approved by the FDA, the EMA, or other comparable regulatory authorities, 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 prasinezumab and may develop our own sales force and marketing infrastructure to co-promote prasinezumab in the U.S. for the treatment of Parkinson's disease and

any future Licensed Products approved for Parkinson's disease in the U.S. If we exercise our co-promotion option and are unable to develop our own sales force and marketing infrastructure to effectively commercialize prasinezumab or other Licensed Products, our ability to generate additional revenue from potential sales of prasinezumab or such products in the U.S. may be harmed. In addition, our right to co-promote prasinezumab and other Licensed Products will terminate if we commence a Phase 3 study for a competitive product that treats Parkinson's disease.

For any other products that may be approved, 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 payers 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 U.S. and non-U.S. markets, our sales of any future products will depend in part upon the availability of reimbursement from third-party payers. Such third-party payers 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 payers often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Third-party payers 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 payers' 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 drug 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 countries, 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 other governments continue to propose and pass legislation designed to reduce the cost of healthcare. In the U.S., 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 U.S. will continue to put pressure on pharmaceutical product pricing. For example, in 2010, the U.S. Patient Protection and Affordable Care Act, as amended by the U.S. Health Care and Education Reconciliation Act (collectively, the "ACA"), was enacted. The ACA substantially changed the way healthcare is financed by both governmental and private insurers and significantly affects the pharmaceutical industry. Among the provisions of the ACA 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 U.S. 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 U.S. False Claims Act and the U.S. 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 now agree to offer 70 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 ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect in 2013 and will stay in effect through 2030, with the exception of a temporary suspension from May 1, 2020, through March 31, 2021, unless additional congressional action is taken. In 2013, the U.S. American Taxpayer Relief Act of 2012, 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.

Since its enactment, there have been judicial, executive, and Congressional challenges to certain aspects of the ACA. The U.S. Supreme Court is currently reviewing the constitutionality of the ACA in its entirety, although it is unclear how the Supreme Court will rule. It is also unclear how other efforts, if any, to challenge, repeal, or replace the ACA will impact the law. The ultimate content, timing, or effect of any healthcare reform legislation on the U.S. healthcare industry is unclear.

We expect that 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 payers. 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 U.S. 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 payers, that coverage or an adequate level of reimbursement will be available, or that third-party payers' 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 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 nonclinical 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 current 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 U.S. Biologics Price Competition and Innovation Act of 2009 (the "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 submitted to the FDA until four years following the date that the reference product was first licensed by the FDA, and cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. However, during the 12-year period of reference product exclusivity, another company may obtain FDA licensure and market a competing version of the reference product if the FDA approves a full de novo BLA, not an abbreviated BLA for a biosimilar product, for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product.

The law is complex and is still being interpreted and implemented by the FDA. Any processes adopted by the FDA to implement the BPCIA could have a material adverse effect on the future commercial prospects for our biologic products. In addition, there has been discussion of whether Congress should reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate implementation of the BPCIA is subject to significant uncertainty.

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 unable to maintain the benefits associated with Orphan Drug Designation, including the potential for supplemental market exclusivity.

Birtamimab has been granted Orphan Drug Designation by both the FDA and EMA for the treatment of AL amyloidosis. In addition, we may seek Orphan Drug Designation for one or more of our current or future drug candidates. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drug products for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may grant orphan designation to a drug product intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 in the United States. 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. Orphan Drug Designation does not convey any advantage in, or shorten the duration of, the regulatory review and licensure process.

If a drug product that has Orphan Drug Designation subsequently receives the first FDA approval or licensure for a particular active ingredient for the disease for which it has such designation, the drug product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including an NDA or BLA, to market the same

drug product for the same indication for seven years, except in limited circumstances such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the biological product was designated. As a result, even if one of our drug candidates receives orphan exclusivity, the FDA can still approve or license other drug products that have a different active ingredient for use in treating the same indication or disease. Further, the FDA can waive orphan exclusivity if we are unable to manufacture sufficient supply of our drug product.

A Fast Track designation by the FDA, even if granted for current or future drug candidates, may not lead to a faster development or regulatory review, licensure process and does not increase the likelihood that our drug candidates will receive marketing licensure.

Birtamimab and PRX012 have been granted Fast Track Designation by the FDA for the treatment of AL amyloidosis and Alzheimer's disease, respectively. In addition, we may seek Fast Track designation for one or more of our future drug candidates. If a drug candidate is intended for the treatment of a serious condition and demonstrates the potential to address an unmet medical need for this condition, the sponsor may apply for FDA Fast Track designation for a particular indication. We may seek Fast Track designation for our drug candidates, but there is no assurance that the FDA will grant this status to any of our drug candidates. The FDA has broad discretion whether or not to grant Fast Track designation, and even if we consider a particular drug candidate to be eligible for this designation, there is no assurance that it will be granted by the FDA. Even if we do receive Fast Track designation, we may not experience a faster review or approval compared to other, non-expedited FDA procedures, and receiving a Fast Track designation does not provide assurance of ultimate FDA approval. In addition, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our applicable clinical development program. Marketing applications filed by sponsors of products granted Fast Track designation may qualify for priority review under FDA policies and procedures, but Fast Track designation does not assure any such review or ultimate marketing approval by the FDA.

We are subject to healthcare and other laws and regulations, including anti-bribery, anti-kickback, fraud and abuse, false claims, and physician payment transparency laws and regulations, which could expose us to criminal, civil and/or administrative sanctions and penalties; exclusion from governmental healthcare programs or reimbursements; contractual damages; and reputational harm.

Our operations and activities are directly, or indirectly through our service providers and collaborators, subject to numerous healthcare and other laws and regulations, including, without limitation, those relating to anti-bribery, anti-kickback, fraud and abuse, false claims, physician payment transparency, and health information privacy and security, in the U.S., the EU, and other countries and jurisdictions in which we conduct our business. These laws include:

- the U.S. 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. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- U.S. federal false claims laws, including the 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 payers that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;
- HIPAA, which imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program and making false statements in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the U.S. Physician Payment Sunshine Act, which requires applicable 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 ("CMS") information related to "payments or other transfers of value" made to physicians (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 (as defined by statute) and their immediate family members. Effective January 1, 2022, these reporting obligations extended to include transfers of value made during the previous year to physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists, and certified nurse midwives;

- state laws and regulations that apply to sales or marketing arrangements; apply to healthcare items or services reimbursed by non-governmental third-party payers, including private insurers; require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines; that restrict payments that may be made to healthcare providers; require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and
- similar and other laws and regulations in the U.S. (federal, state and local), in the EU (including member countries), and other countries and jurisdictions.

Ensuring our compliance with applicable laws and regulations involves substantial costs, and it is possible that governmental authorities or third parties will assert that our business practices fail to comply with these laws and regulations. If our actions are found to be in violation of any laws and regulations, we may be subject to significant civil, criminal, and administrative damages, penalties, and fines, as well as exclusion from participation in government healthcare programs, curtailment or restructuring of our operations, and reputational harm, any of which could have a material adverse effect on our business, financial condition, or results of operations.

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, healthcare 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 for all of our clinical trials. 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 ordinary 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 assist us with these activities. 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, the EMA, and other comparable regulatory authorities require 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, the EMA, or other comparable 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 cGMPs. 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 third parties with which we are working have performed well; however, if these third parties do not successfully carry out their contractual duties, meet expected deadlines, 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 and nonclinical 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, development, and/or commercialization plans.

Research, development, 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 research, development, and/or 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 third-party manufacturers to supply us with nonclinical and clinical trial supplies of all of our drug candidates, and we will depend on third-party manufacturers to supply us with any drug product for commercial sale if we obtain marketing approval from the FDA, the EMA, or any other comparable regulatory authority for any of our drug candidates.

We do not own or operate facilities for the manufacture, packaging, labeling, storage, testing, or distribution of nonclinical or clinical supplies of any of our drug candidates. We instead contract with and rely on third parties to manufacture, package, label, store, test, and distribute nonclinical and clinical supplies of our drug candidates, and we plan to continue to do so for the foreseeable future. We also rely on third-party consultants to assist us with managing these third parties and with our manufacturing strategy. If any of these third parties fail to perform these activities for us, nonclinical or clinical development of our drug candidates could be delayed, which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects.

If the FDA, the EMA, or any other comparable regulatory authority approves any of our drug candidates for commercial sale, we expect to continue to rely, at least initially, on third parties to manufacture, package, label, store, test, and distribute commercial supplies of such approved drug product. Significant scale-up of manufacturing may require additional

comparability validation studies, which the FDA, the EMA, or other comparable regulatory authorities must review and approve. Our third-party manufacturers might not be able to successfully establish such comparability or increase their manufacturing capacity in a timely or economic manner, or at all. If our third-party manufacturers are unable to successfully establish comparability or increase their manufacturing capacity for any drug product, and we are unable to timely establish our own manufacturing capabilities, the commercial launch of that drug candidate could be delayed or there could be a shortage in supply, which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects.

Our third-party manufacturers' facilities could be damaged by fire, power interruption, information system failure, natural disaster or other similar event, which could cause a delay or shortage in supplies of our drug candidates, which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects.

Our drug candidates require, and any future drug product will require, precise, high quality manufacturing, packaging, labeling, storage, and testing that meet stringent cGMP, other regulatory requirements and other standards. Our third-party manufacturers are subject to ongoing periodic and unannounced inspections by the FDA, the EMA, and other comparable regulatory authorities to ensure compliance with these cGMPs, other regulatory requirements and other standards. We do not have control over, and are dependent upon, our third-party manufacturers' compliance with these cGMPs, regulations and standards. Any failure by a third-party manufacturer to comply with these cGMPs, regulations or standards or that compromises the safety of any of our drug candidates or any drug product could cause a delay or suspension of production of nonclinical or clinical supplies of our drug candidates or commercial supplies of drug product, cause a delay or suspension of nonclinical or clinical development, product approval and/or commercialization of our drug candidates or drug product, result in seizure or recall of clinical or commercial supplies, result in fines and civil penalties, result in liability for any patient injury or death or otherwise increase our costs, any of which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects. If a third-party manufacturer cannot or fails to perform its contractual commitments, does not have sufficient capacity to meet our nonclinical, clinical or eventual commercial requirements or fails to meet cGMPs, regulations or other standards, we may be required to replace it or qualify an additional third-party manufacturer. Although we believe there are a number of potential alternative manufacturers, the number of manufacturers with the necessary manufacturing and regulatory expertise and facilities to manufacture biologics like our antibodies is limited. In addition, we could incur significant additional costs and delays in identifying and qualifying any new third-party manufacturer, due to the technology transfer to such new manufacturer and because the FDA, the EMA, and other comparable regulatory authorities must approve any new manufacturer prior to manufacturing our drug candidates. Such approval would require successful technology transfer, comparability and other testing and compliance inspections. Transferring manufacturing to a new manufacturer could therefore interrupt supply, delay our clinical trials and any commercial launch, and/or increase our costs for our drug candidates, any of which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects.

Rentschler Biopharma SE ("Rentschler") and Catalent Pharma Solutions, LLC ("Catalent") are our third-party manufacturers of clinical supplies of birtamimab. We are dependent on Rentschler and Catalent to manufacture these clinical supplies.

Roche, with whom we are collaborating on development of prasinezumab, manufactured clinical supplies for the Phase 2 and Phase 2b clinical trials for prasinezumab and is expected to do so for any subsequent clinical trials of prasinezumab. We are dependent on Roche to continue to manufacture these clinical supplies.

We are dependent on Novo Nordisk, and its third-party manufacturers if applicable, to manufacture clinical supplies of NNC6019.

We are dependent on BMS, and its third-party manufacturers if applicable, to manufacture clinical supplies of BMS-986446/PRX005.

Catalent is our third-party manufacturer of clinical supplies of our drug candidate PRX012. We are dependent on Catalent to manufacture these clinical supplies.

In July 2021, the Company sold the equity interests of a subsidiary that owns and has exclusive licenses to intellectual property rights and other assets pertaining to the investigational humanized monoclonal antibody known as NNC6019 (formerly PRX004), and we might not realize the anticipated benefits of such transaction.

On July 8, 2021, the Company, together with its wholly owned subsidiary, Prothena Biosciences Limited ("PBL"), entered into a Share Purchase Agreement with Novo Nordisk and NNRE (together with Novo Nordisk, "Buyer"), pursuant to which PBL sold and transferred to NNRE, all issued and outstanding ordinary shares of Neotope Neuroscience Limited, a wholly owned subsidiary of PBL, for an aggregate purchase price of up to $1.23 billion. The aggregate purchase price consists of an upfront payment of $60 million in cash, subject to customary purchase price adjustments, and an aggregate of $1.17

billion in cash, payable on Buyer's achievement of certain development, commercialization and net sales-based milestones. On November 21, 2022, we earned a $40 million milestone payment. There can be no assurance that such remaining milestones will be met. If we do not receive additional milestone payments as a result of the transaction in anticipated amounts or at all, we may need to seek additional sources of capital to pursue further research, development, and/or commercialization of our drug candidates, and this could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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 U.S. 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, factual and scientific 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. Additionally, our ability to obtain patent protection for our drug candidates also depends on our collaborators, partners, contractors, and employees involved in the generation of intellectual property to carry out their contractual duties, including those to assign or license relevant intellectual property rights developed on our behalf to us.

In addition, the strength of patents in the biotechnology and pharmaceutical field can be uncertain, and evaluating the scope of such patents involves complex legal, factual, and scientific analyses and has in recent years been the subject of much litigation, resulting in court decisions, including Supreme Court decisions, which have increased uncertainties as to the ability to enforce patent rights in the future. 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 U.S. 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 (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 U.S. 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 non-U.S. 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 drug candidates will be considered patentable by the USPTO and courts in the U.S. or by the patent offices and courts in other 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.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our drug candidates in any jurisdiction. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our drug candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

We may be subject to a third-party preissuance submission of prior art to the USPTO and foreign patent agencies, or become involved in opposition, derivation, reexamination, *inter partes* review, post-grant review, or other patent office proceedings or litigation, in the U.S. or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could result in loss of exclusivity or in patent claims being narrowed, invalidated, or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. In addition, given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Any failure to obtain or maintain patent protection with respect to our drug candidates could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is costly, time-consuming, and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs, and may diminish our ability to protect our inventions, obtain, maintain, and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and licensed patents. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law on September 16, 2011, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. 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 and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. A third party that files a patent application in the USPTO after March 2013, but before we file an application covering the same invention, could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our drug candidates and other proprietary technologies we may develop or (ii) invent any of the inventions claimed in our or our licensor's patents or patent applications. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing the claimed invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license. 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, financial condition, results of operations, and/or growth prospects.

Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to

obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained. Depending on decisions by Congress, the federal courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. We cannot predict how future decisions by Congress, the federal courts or the USPTO may impact the value of our patents.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment, and other similar provisions during the patent application process. Although an inadvertent lapse, including due to the effect of the COVID-19 pandemic on us or our patent maintenance vendors, can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application or invalidity of an issued patent include failure to respond to official actions within prescribed time limits, non-payment of fees, failure to properly legalize and submit formal documents, and failure to submit certain prior art. In any such event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, if all maintenance fees are paid timely, the natural expiration of a patent is generally 20 years after its first effective filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Given the amount of time required for the development, testing, and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such drug candidates are commercialized. Even if patents covering our drug candidates are obtained, once a patent covering a drug candidate has expired, we may be open to competition, including biosimilar or generic medications. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing drug candidates similar or identical to ours. Our patents issued as of December 31, 2022, are anticipated to expire on dates ranging from 2023 to 2042, subject to any patent extensions that may be available for such patents. If patents are issued on our patent applications pending as of December 31, 2022, the resulting patents are projected to expire on dates ranging from 2025 to 2042. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. A patent term extension based on regulatory delay may be available in the United States. However, only a single patent can be extended for each first regulatory review period for a product, and any patent can be extended only once, for a single product. Moreover, the scope of protection during the period of the patent term extension does not extend to the full scope of the claim, but instead only to the scope of the product as approved. Laws governing analogous patent term extensions in foreign jurisdictions vary widely, as do laws governing the ability to obtain multiple patents from a single patent family. Additionally, we may not receive an extension if we fail to exercise due diligence during the testing phase or regulatory review process, apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. If we are unable to obtain patent term extension or restoration, or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration and may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to launch their product earlier than might otherwise be the case, and our revenue could be reduced, possibly materially. If we do not have sufficient patent life to protect our products, our business and results of operations will be adversely affected.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our drug candidates or as a result of questions regarding co-ownership of potential joint inventions. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our drug candidates. Alternatively, or additionally, we may enter into agreements to clarify the scope of our rights in such intellectual property. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive

ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

We or our licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that we or our licensors are not the sole and exclusive owners of the patents we in-licensed. If other third parties have ownership rights or other rights to our patents, including in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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

Patents are of national or regional effect, and filing, prosecuting, maintaining, and defending patents on drug candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can have a different scope and strength than do those in the United States. In addition, the laws of some foreign countries, particularly certain developing countries, do not currently, or may not in the future, protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as those in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or adequate to prevent them from competing.

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 or technology 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, including due to the impact of the COVID-19 pandemic on our business operations or our use of the intellectual property licensed to us in an unauthorized manner, 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, harming our ability to develop, manufacture, and/or commercialize our platform or drug candidates.

In addition, the agreements under which we license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and/or growth prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected drug candidates. Our business also would suffer if any current or future licensors fail to abide by the terms of the license, if the licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights.

In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the

technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant research programs or drug candidates and our business, financial condition, results of operations, and/or growth prospects could suffer.

Licensing of intellectual property is of critical importance to our business and involves complex legal, business and scientific issues and is complicated by the rapid pace of scientific discovery in our industry. Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including those relating to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- whether we are complying with our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our drug candidates, and what activities satisfy those diligence obligations;
- the priority of invention of patented technology;
- the amount and timing of payments owed under license agreements; and
- the allocation of ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and by us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected drug candidates. We are generally also subject to all of the same risks with respect to protection of intellectual property that we license as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize our products could suffer.

We depend, in part, on our licensors to file, prosecute, maintain, defend, and enforce patents and patent applications 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. If our licensors or any future licensees having rights to file, prosecute, maintain, and defend our patent rights fail to conduct these activities for patents or patent applications covering any of our drug candidates, including due to the impact of the COVID-19 pandemic on our licensors' business operations, our ability to develop and commercialize those drug candidates may be adversely affected and we may not be able to prevent competitors from making, using, or selling competing products. We cannot be certain that such activities by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with some of our licensors, the licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and, even if we are permitted to pursue such enforcement or defense, we cannot ensure the cooperation of our licensors. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent us from continuing to license intellectual property that we may need to operate our business. In addition, even when we have the right to control patent prosecution of licensed patents and patent applications, enforcement of licensed patents, or defense of claims asserting the invalidity of those patents, we may still be adversely affected or prejudiced by actions or inactions of our licensors and their counsel that took place prior to or after our assuming control. In the event we breach any of our obligations related to such prosecution, we may incur significant liability to our licensing partners.

We may wish to form collaborations in the future with respect to our drug candidates, but may not be able to do so or to realize the potential benefits of such transactions, which may cause us to alter or delay our development and commercialization plans.

Our drug candidates may also require specific components to work effectively and efficiently, and rights to those components may be held by others. We may be unable to in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, which would harm our business. If we fail to obtain licenses to necessary third-party intellectual property rights, we may need to cease use of the compositions or methods covered by such third-party intellectual property rights and may need to seek to develop alternative approaches that do not infringe on such intellectual property rights which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. Any delays in entering into new collaborations or strategic partnership agreements related to our drug candidates could delay the development and commercialization of our drug candidates in certain geographies, which could harm our business prospects, financial condition, and results of operations.

The licensing and acquisition of third-party intellectual property rights is a competitive practice, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our drug candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional drug candidates that we may seek to acquire.

Moreover, some of our owned and in-licensed patents or patent applications or future patents are or may be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of our patents in order to enforce such patents against third parties, and such cooperation may not be provided to us. Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

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, as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post-grant review, and reexamination proceedings before the USPTO, or oppositions and other comparable proceedings in foreign jurisdictions , as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post-grant review, and reexamination proceedings before the USPTO, or oppositions and other comparable proceedings in foreign jurisdictions. 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. Furthermore, patent reform and changes to patent laws add uncertainty to the possibility of challenge to our patents in the future. We cannot assure you that our drug candidates and other proprietary technologies we may develop will not infringe existing or future patents owned by third parties.

In addition, third parties may challenge our existing or future patents. Competitors may also infringe our patents or other intellectual property or the intellectual property of our licensors. To cease such infringement or unauthorized use, we may be required to file patent infringement claims, which can be expensive and time-consuming and divert the time and attention of our management and scientific personnel. 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; and/or
- findings that our drug candidates, products, or activities infringe third-party patents or other intellectual property rights.

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and, even if resolved in our favor, is likely to divert significant resources from our core business including distracting our technical and management personnel from their normal responsibilities. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

Third parties asserting their patent or other intellectual property rights against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our drug candidates or force us to cease some of our business operations. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and other employee resources from our business, cause development delays, and may impact our reputation. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

In the event we are able to establish third-party infringement of our patents, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our ordinary shares.

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, including treble damages and attorneys' fees for willful infringement;
- obtain one or more licenses from third parties and potentially pay royalties;
- redesign our infringing products, which may be impossible on a cost-effective basis or require substantial time and monetary expenditure;
- 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.

In that event, we would be unable to further develop and commercialize our drug candidates, which could harm our business significantly.

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 current or future trademarks or trade names may be challenged, infringed, circumvented, declared generic or descriptive, or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names , which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected. We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names.

Moreover, any name we have proposed to use with our drug candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA (or an equivalent administrative body in a foreign jurisdiction) objects to any of our proposed proprietary product names, it may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. If we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

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. Any disclosure, either intentional or unintentional, by our employees, the employees of third parties with whom we share our facilities or third-party consultants and vendors that we engage to perform research, clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. In addition, others may independently discover our trade secrets and proprietary information, and we would have no right to prevent them from using that technology or information to compete with us. 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. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, or misappropriation of our intellectual property by third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results, and financial condition.

We may be subject to claims that our employees, collaborators, partners, contractors, or advisors have wrongfully used or disclosed alleged trade secrets of third parties.

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. Likewise, our collaborators, partners, contractors, and advisors may have in the past, or may currently, work with or for universities, 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 third parties is not disclosed to us or used in their work for us, we may be subject to claims that we or our employees, collaborators, partners, contractors, or advisors have used or disclosed intellectual property, including trade secrets or other proprietary information, of third parties. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to our drug candidates, if such technologies or features are found to incorporate, be derived from, or benefited from the knowledge of the trade secrets or other proprietary information of third parties. Moreover, any such litigation or the threat thereof may adversely affect our reputation, our ability to form strategic alliances or sublicense our rights to collaborators, engage with scientific advisors or hire employees or consultants, each of which would have an adverse effect on our business, results of operations and financial condition. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make drug candidates that are similar to ours but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to make the inventions covered by the issued patent or pending patent application that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or have exclusively licensed may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- we cannot predict the scope of protection of any patent issuing based on our patent applications, including whether the patent applications that we own or in-license will result in issued patents with claims that cover our drug candidates or uses thereof in the United States or in other foreign countries;
- the claims of any patent issuing based on our patent applications may not provide protection against competitors or any competitive advantages, or may be challenged by third parties;
- if enforced, a court may not hold that our patents are valid, enforceable and infringed;
- we may need to initiate litigation or administrative proceedings to enforce and/or defend our patent rights which will be costly whether we win or lose;
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property;
- we may fail to adequately protect and police our trademarks and trade secrets; and
- the patents of others may have an adverse effect on our business, including if others obtain patents claiming subject matter similar to or improving that covered by our patents and patent applications.

Should any of these events occur, they could significantly harm our business, results of operations, and prospects.

Risks Related to Our Ordinary Shares

The market price of our ordinary 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. 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 nonclinical research and clinical trials;
- the execution of our agreements with third parties, including with Roche, BMS, and Novo Nordisk;
- failure or delays in advancing our nonclinical drug candidates or other drug candidates we may develop in the future into clinical trials;
- results of clinical trials conducted by others, including on drugs that would compete with our drug candidates;
- issues in manufacturing our drug candidates;
- regulatory developments or enforcement in the U.S. and other 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 by us or by existing shareholders;
- 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 ordinary 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;
- changes in tax laws or regulations applicable to our business or the interpretations of those tax laws and regulations by taxing authorities; or
- fluctuations in the budgets 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. Some companies that experienced volatility in the trading price of their stock have been the subject of securities class action litigation. 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 (including the sale of ordinary shares pursuant to our December 2021 Distribution Agreement), 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. As of September 30, 2023, the number of ordinary shares available for issuance pursuant to outstanding and future equity awards under our equity plans was 13,522,541.

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 U.S. Securities Exchange Act of 1934, as amended, including the requirements of Section 404 of the U.S. Sarbanes-Oxley Act, which require annual management assessments of the effectiveness of our internal control over financial reporting. In addition, under Section 404(b) of the U.S. Sarbanes-Oxley Act, if we are either an “accelerated filer” or “large accelerated filer,” our independent registered public accounting firm must attest to the effectiveness of our internal control over financial reporting. 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. 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 our financial statements for external purposes in accordance with accounting

principles generally accepted in the U.S. During the course of our review and testing of our internal controls, we may identify deficiencies and be unable to remediate them before we must provide the required reports. Furthermore, if we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis and our consolidated financial statements may be materially misstated. We, or our independent registered public accounting firm (if required), may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall.

We cannot provide assurance that a material weakness will not occur in the future, or that we will be able to conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 and the related rules and regulations of the SEC when required. A material weakness in internal control over financial reporting is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim consolidated financial statements will not be prevented or detected on a timely basis by the company's internal controls. If we cannot in the future favorably assess, or our independent registered public accounting firm (if required), is unable to provide an unqualified attestation report on, the effectiveness of our internal controls over financial reporting, investor confidence in the reliability of our financial reports may be adversely affected, which could have a material adverse effect on our share price. In addition, any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from the Nasdaq Global Select Market or other adverse consequences that would have an adverse effect on our business, financial position and results of operations.

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 United States holders of our ordinary shares.

Significant potential adverse U.S. federal income tax implications generally apply to U.S. investors owning shares of a passive foreign investment company ("PFIC"), directly or indirectly. In general, we would be a PFIC for a taxable year if either (i) 75% or more of our income constitutes passive income, or (ii) 50% or more of our assets produce passive income or are held for the production of passive income. Changes in the composition of our active or passive income, passive assets or changes in our fair market value 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).

We do not believe we were a PFIC for U.S. federal income tax purposes for our taxable year ended December 31, 2022. However, the application of the PFIC rules is subject to uncertainties in a number of respects, and we cannot assure that the U.S. Internal Revenue Service (the "IRS") will not take a contrary position. We also cannot assure that we will not be a PFIC for U.S. federal income tax purposes for the current taxable year or any future taxable year.

We may not be able to successfully maintain our tax rates, which could adversely affect our business and financial condition, results of operations and growth prospects.

We are incorporated in Ireland and maintain subsidiaries or offices in Ireland and the U.S. We are able to achieve a low average tax rate through the performance of certain functions and ownership of certain assets in tax-efficient jurisdictions, together with intra-group service agreements. However, changes in tax laws or interpretations thereof in any of these jurisdictions could adversely affect our ability to do so in the future. Taxing authorities, such as the IRS and the Irish Revenue Commissioners ("Irish Revenue"), actively audit and otherwise challenge these types of arrangements, and have done so in our industry. We are subject to reviews and audits by the IRS, Irish Revenue and other taxing authorities from time to time, and the IRS, Irish Revenue or other taxing authority may challenge our structure and inter-group arrangements. Responding to or defending against challenges from taxing authorities could be expensive and time consuming, and could divert management's time and focus away from operating our business. We cannot predict whether and when taxing authorities will conduct an audit, challenge our tax structure or the cost involved in responding to any such audit or challenge. If we are unsuccessful, we may be required to pay taxes for prior periods, interest, fines or penalties, and may be obligated to pay increased taxes in the future, all of which could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects. In addition to the impact on changes in tax laws, our provision for income tax can be materially impacted, for example, by the geographical mix of our profits and losses, changes in our business, such as internal restructuring and acquisitions, changes and accounting guidance and other regulatory, legislative or judicial developments changes in tax rates, tax audit determinations, changes in our uncertain tax positions, changes in our intent and capacity to permanently reinvest foreign earnings, changes to our transfer pricing practices, tax deductions attributed to equity compensation and changes in our need for a valuation allowance for deferred tax assets.

Future changes to the tax laws relating to multinational corporations could adversely affect us.

Under current law, we are treated as a foreign corporation for U.S. federal tax purposes. However, changes to the U.S. Internal Revenue Code, U.S. Treasury Regulations or other IRS guidance thereunder could adversely affect our status as a

foreign corporation or otherwise affect our effective tax rate. For example, in 2017 the United States enacted tax reform that contained significant changes to corporate taxation, including a provision that requires capitalization and amortization of research and development costs over five years for tax years beginning after December 31, 2021. In addition, the Irish Government, Irish Revenue, U.S. Congress, the IRS, the Organization for Economic Co-operation and Development, and other governments and agencies in jurisdictions where we do business have recently focused on issues related to the taxation of multinational corporations, and specifically in the area of "base erosion and profit shifting," such as where payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. As a result, the tax laws in Ireland, the U.S., and other countries in which we do business could change on a prospective or retroactive basis, and any such changes could have an adverse effect on our business, financial condition, results of operations, and/or growth prospects.

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 U.S. 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 U.S. 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 Act 2014, as amended (the "Companies Act"), which differs 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 U.S.

The operation of the Irish Takeover Rules may affect the ability of certain parties to acquire our ordinary shares.

Under the Irish Takeover Panel Act, 1997, Takeover Rules, 2022 (the "Irish Takeover Rules"), if an acquisition of ordinary shares were to increase the aggregate holding of the acquirer and its concert parties to ordinary shares that represent 30% or more of the voting rights of the company, the acquirer and, in certain circumstances, its concert parties would be required (except with the consent of the Irish Takeover Panel) to make an offer for the outstanding ordinary shares at a price not less than the highest price paid for the ordinary shares by the acquirer or its concert parties during the previous 12 months. This requirement would also be triggered by an acquisition of ordinary shares by a person holding (together with its concert parties) ordinary shares that represent between 30% and 50% of the voting rights in the company if the effect of such acquisition were to increase that person's percentage of the voting rights by 0.05% within a 12 month period. Under the Irish Takeover Rules, certain separate concert parties are presumed to be acting in concert. Our board of directors and their relevant family members, related trusts and "controlled companies" are presumed to be acting in concert with any corporate shareholder who holds 20% or more of our shares. The application of these presumptions may result in restrictions upon the ability of any of the concert parties and/or members of our board of directors to acquire more of our securities, including under the terms of any executive incentive arrangements. In the future, we may consult with the Irish Takeover Panel with respect to the application of this presumption and the restrictions on the ability to acquire further securities, although we are unable to provide any assurance as to whether the Irish Takeover Panel will overrule this presumption. Accordingly, the application of the Irish Takeover Rules may restrict the ability of certain of our shareholders and directors to acquire our ordinary shares.

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 Rules, pursuant to which our Board is not permitted to take any action that might frustrate an offer for our ordinary 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 ordinary 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 U.S.

Irish law requires that our shareholders renew every five years the authority of our Board of Directors to issue shares and to do so for cash without applying the statutory pre-emption right, and if our shareholders do not renew these authorizations by May 17, 2027 (or any renewal is subject to limitations), our ability to raise additional capital to fund our operations would be limited.

As an Irish incorporated company, we are governed by the Companies Act. The Companies Act requires that every five years our shareholders renew the separate authorities of our Board to (a) allot and issue shares, and (b) opt out of the statutory pre-emption right that otherwise applies to share issuances for cash (which pre-emption right would require that shares issued for cash be offered to our existing shareholders on a pro rata basis before the shares may be issued to new shareholders). At our shareholders' annual general meeting held on May 17, 2022, our shareholders authorized our Board to issue ordinary shares up to the amount of our authorized share capital, and to opt out of the statutory pre-emption right for such issuances. Under Irish law, these authorizations will expire on May 17, 2027, five years after our shareholders last renewed these authorizations. Irish law requires that our shareholders renew the authority for our Board to issue ordinary shares by a resolution approved by not less than 50% of the votes cast at a general meeting of our shareholders. Irish law requires that our shareholders renew the authority of our Board to opt out of the statutory pre-emption right in share issuances for cash by a resolution approved by not less than 75% of the votes cast at a general meeting of our shareholders. If these authorizations are not renewed before May 17, 2027, or are renewed with limitations, our Board would be limited in its ability to issue shares, which would limit our ability to raise additional capital to fund our operations, including the research, development and potential commercialization of our drug candidates.

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

Irish stamp duty may be payable in respect of transfers of our ordinary shares (currently at the rate of 1% of the price paid or the market value of the shares acquired, if greater).

Under the Irish Stamp Duties Consolidation Act, 1999 (the “Stamp Duties Act”), a transfer of our ordinary shares from a seller who holds shares through The Depository Trust Company (“DTC”) to a buyer who holds the acquired shares through DTC should not be subject to Irish stamp duty. Shareholders may also transfer their shares into or out of DTC without giving rise to Irish stamp duty provided that there is no change in the beneficial ownership of such shares and the transfer into or out of DTC is not effected in contemplation of a subsequent sale of such shares to a third party; in order to benefit from this exemption from Irish stamp duty, the seller must confirm to us that there is no change in the ultimate beneficial ownership of the shares as a result of the transfer and there is no agreement for the sale of the shares by the beneficial owner to a third party being contemplated.

A transfer of our ordinary shares (i) by a seller who holds shares outside of DTC to any buyer, or (ii) by a seller who holds the shares through DTC to a buyer who holds the acquired shares outside of DTC, may be subject to Irish stamp duty. Payment of any Irish stamp duty is generally a legal obligation of the transferee.

Any Irish stamp duty payable on transfers of our ordinary shares could adversely affect the price of those shares.

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

We anticipate losing money for the foreseeable future and, even if we do turn a profit, 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 25%) 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). Non-Irish resident shareholders who receive dividends subject to Irish dividend withholding tax will generally have no further liability to Irish income tax on those dividends.

Prothena ordinary 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 ordinary shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our ordinary 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. It is recommended that each shareholder consult his or her own tax advisor as to the tax consequences of holding our ordinary 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.

ITEM 5. OTHER INFORMATION

On August 10, 2023, Dennis J. Selkoe, director, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 20,000 shares of the Company's ordinary shares until November 15, 2024.

On August 8, 2023, Michael J. Malecek, Chief Legal Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 88,000 shares of the Company's ordinary shares until November 30, 2024.

ITEM 6. EXHIBITS

EXHIBIT INDEX

Exhibit No.	Description	Previously Filed				Filed Herewith
		Form	File No.	Filing Date	Exhibit	
10.1	Consulting Agreement, October 1, 2023, between Prothena Biosciences Inc and Dennis J. Selkoe					X
10.2	Global License Agreement, dated as of July 5, 2023, by and between Prothena Biosciences Limited and Celgene Switzerland LLC					X
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 - The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

Indicates management contract or compensatory plan or arrangement.

* *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.*

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: November 2, 2023

Prothena Corporation plc
(Registrant)

/s/ Gene G. Kinney

Gene G. Kinney

President and Chief Executive Officer

/s/ Tran B. Nguyen

Tran B. Nguyen

Chief Financial Officer and Chief Strategy Officer

Exhibit 10.1

CONSULTING AGREEMENT

This Consulting Agreement (this "Agreement") is effective as of October 1, 2023 (the "Effective Date") and is made by and between Dennis J. Selkoe, M.D., an individual ("Consultant"), and Prothena Biosciences Inc, a Delaware corporation with offices at 331 Oyster Point Boulevard, South San Francisco, CA 94080, U.S.A. ("Prothena"). Consultant and Prothena may each be referred to individually herein as a "Party" and collectively as the "Parties".

WHEREAS, Prothena is engaged in the business of researching and developing therapies for neurodegenerative diseases;

WHEREAS, Consultant is an expert in neurodegenerative diseases; and

WHEREAS, Prothena desires to engage Consultant to provide services to Prothena and Consultant desires to be so engaged.

NOW, THEREFORE, in connection therewith and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Consultant and Prothena agree as follows:

1. SCOPE OF SERVICES

1.1 Services. Subject to the terms and conditions of this Agreement, Consultant shall perform services to Prothena as requested in connection with its assessment of potential business development opportunities and matters related to partnered collaboration programs (the "Services").

1.2 Performance. Consultant shall perform the Services (a) in a professional, diligent, workmanlike and timely manner, that meets or exceeds the standards and practices that are generally accepted in the industry and exercised by others performing similar services, and (b) in strict compliance with all applicable laws, rules, regulations and guidelines, including but not limited to the U.S. Federal Food, Drug and Cosmetic Act, the U.S. Federal Anti-Kickback Statute, the U.S. Foreign Corrupt Practices Act, and the PhRMA Code on Interactions with Healthcare Professionals. None of the Services nor the Work Product (defined in Section 1.3 below) shall infringe, misappropriate or violate any proprietary rights of any third party.

1.3 Work Product. Consultant shall (a) create in a timely and accurate manner, and (b) maintain during the Term (defined in Section 7.1 below), written records of the results, data and other materials and deliverables generated or recorded in the performance of the Services (the "Work Product"), which Work Product shall be owned by, and shall be Confidential Information (defined below) of, Prothena. Promptly upon completion of the Services or termination of this Agreement, or upon earlier request by Prothena, Consultant shall deliver the Work Product to Prothena.

1.4 Independent Contractor. Consultant is an independent contractor and nothing in this Agreement or the Services provided hereunder is intended to reflect or create, or shall be construed as reflecting or creating, the relationship of partners, principal and agent, or employer and employee. Neither Party shall have any express or implied authority to assume or create any obligation on behalf of, or in the name of, the other Party to any contract or undertaking with any third party directly or indirectly as a result of this Agreement. Any taxes, insurance or benefits imposed on Consultant due to his business activities, including any Services provided hereunder, shall be the sole responsibility of Consultant.

1.5 Prothena Affiliates. Prothena may specify that the Consultant's Services will be for the benefit of an Affiliate of Prothena. The term "Affiliate" means any entity that controls, is controlled by or is under common control with Prothena.

2. COMPENSATION, EXPENSES AND INVOICING

2.1 Compensation. Prothena shall pay Consultant at the rate of $500.00 for each hour of Services actually performed by Consultant. For the avoidance of doubt, travel time, if any, required to perform the Services shall not be billable except to the extent that Services are actually performed during such time.

2.2 Travel and Other Expenses. Prothena shall reimburse Consultant for reasonable travel and other expenses actually incurred by Consultant, without commission or mark-up, to the extent necessary to perform the Services.

2.3 Maximum Amount Payable. Notwithstanding anything to the contrary herein, the maximum aggregate amount payable to Consultant under this Agreement, including for reimbursement of expenses, shall not exceed $60,000.

2.4 Invoicing. Consultant shall submit to Prothena a written invoice ("Invoice") monthly for Services actually performed and expenses actually incurred. Each such Invoice shall include (a) a description of the Services performed, by date, and the amount of time spent for each Service, (b) the compensation earned by Consultant in accordance with Section 2.1 above, and (c) the reimbursable expenses incurred by Consultant in accordance with Section 2.2 above. Invoices shall be sent by e-mail to Accounting@Prothena.com. Prothena shall pay to Consultant all undisputed amounts due no later than thirty (30) days from Prothena's receipt of the applicable Invoice; provided, however, that Prothena may withhold payment pending delivery by Consultant to Prothena of any Work Product.

3. CONFIDENTIALITY

3.1 Confidential Information. "Confidential Information" means any and all confidential, proprietary and/or trade secret information or materials that are directly or indirectly disclosed by or on behalf of Prothena or its Affiliates to Consultant or its Affiliates in connection with this Agreement. Confidential Information includes, without limitation, trade secrets, processes, formulae, data, know-how, improvements, inventions, techniques, marketing plans, strategies, forecasts, employees and customer and contact lists.

3.2 Exceptions. Confidential Information shall not include any information that Consultant can demonstrate by competent written evidence (a) previously was in his possession, as shown by its pre-existing records, without violation of any obligation of confidentiality, (b) has become publicly known through no wrongful act of or breach of this Agreement by Consultant, (c) was received by Consultant without breach of this Agreement from a third party without restriction as to the use and disclosure of the information, or (d) was independently developed by Consultant without use of the Confidential Information.

3.3 Confidentiality. Consultant shall maintain in confidence and shall not disclose or use for any purpose other than as expressly provided for in this Agreement any Confidential Information. Consultant may use and disclose Confidential Information only to its directors, officers, employees and permitted subcontractors, and solely to the extent required and for the purpose of performing the Services. Consultant shall not use the Confidential Information for any purpose or in any manner that would constitute a violation of any law, rule, regulation or guideline. Consultant shall ensure that any of its directors, officers, employees and subcontractors receiving any Confidential Information as permitted under this Agreement shall

be informed of the confidential nature of such Confidential Information and shall be bound by confidentiality obligations at least as strict as the confidentiality obligations in this Agreement to protect the confidentiality of such Confidential Information. Any failure by any such directors, officers, employee or subcontractors of Consultant to meet the foregoing obligations shall be deemed to be a breach by Consultant.

3.4 Authorized Disclosures. If Consultant is required by a valid order of a court or other governmental body or otherwise required by the law to disclose Confidential Information, it shall give Prothena timely written notice of such a requirement before doing so and shall cooperate with Prothena to seek a protective order, confidential treatment or other appropriate protections of such Confidential Information.

3.5 Notice. Consultant will promptly report to Prothena any actual or suspected breach of the terms of this Section 3, and will take all reasonable further steps requested by Prothena to prevent, control or remedy any such breach.

3.6 Return of Confidential Information. Upon request of Prothena or the termination of this Agreement, Consultant shall (a) return to Prothena all tangible forms of the Confidential Information and (b) destroy all electronic forms of the Confidential Information, including all notes, reports or other documents prepared by Consultant that contain any Confidential Information in Consultant's possession, custody or control, within thirty (30) days of such request or termination; provided, however, that Consultant may retain a single copy of the Confidential Information in a secure format for the sole purpose of determining the scope of Consultant's obligations under this Agreement.

3.7 Survival. The confidentiality and non-use obligations set forth in this Section 3 shall survive termination of this Agreement and continue for a period of seven (7) years following the date of such termination of this Agreement.

3.8 Injunctive Relief and Irreparable Harm. Consultant agrees that its breach of any of the obligations of this Section 3 may cause Prothena irreparable damage for which recovery of money damages may be inadequate. Prothena will, therefore, be entitled to seek timely injunctive relief without the necessity of proving money damages, in addition to any and all remedies available at law or equity.

3.9 Defend Trade Secrets Act Notice of Immunity Rights. Consultant acknowledges that the Company has provided Consultant with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) Consultant will not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law; (b) Consultant will not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and (c) if Consultant files a lawsuit for retaliation by the Company for reporting a suspected violation of law, Consultant may disclose the Confidential Information to its attorney and use the Confidential Information in the court proceeding, if Consultant files any document containing the Confidential Information under seal, and does not disclose the Confidential Information, except pursuant to court order.

4. INTELLECTUAL PROPERTY

4.1 Intellectual Property. "Intellectual Property" means any and all ideas, concepts, discoveries, inventions, developments, formulae, processes, know-how, trade secrets, techniques,

materials, methodologies, modifications, inventions, innovations, improvements, processes, writings, documentation, electronic code, data and rights (whether or not protectable under state, federal or other jurisdictions' patent, trademark, copyright or similar laws) or the like, whether or not written or otherwise fixed in any form or medium, regardless of the media on which contained and whether or not patentable or copyrightable, and all intellectual property rights therein.

4.2 Project IP. Prothena shall solely and exclusively own all right, title and interest in and to the Work Product and all Intellectual Property arising during the course of performance of the Services, whether made solely by either Party or jointly by the Parties (collectively, the "Project IP"). Consultant hereby assigns to Prothena, its successors or assigns, as the case may be, all rights, titles and interest in the Project IP. Consultant shall promptly notify Prothena in writing of any inventions within the Project IP conceived of, or reduced to practice, by Consultant, together with a reasonable description of any such invention.

4.3 Assistance. Consultant agrees to execute such documents and take such action as Prothena may request to memorialize, secure and perfect Prothena's interest in the Project IP. If Prothena is unable for any reason, after reasonable effort, to secure Consultant's signature on any document needed in connection with the actions specified above, Consultant hereby irrevocably designates and appoints Prothena as Consultant's duly authorized officers and agents as Consultant's agent and attorney-in-fact, which appointment is coupled with an interest, to act for and on Consultant's behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph with the same legal force and effect as if executed by Consultant.

4.4 No Other Rights. Delivery of any Intellectual Property or Confidential Information of Prothena to Consultant shall not be deemed to grant to Consultant any right or licenses under such Confidential Information or under any Intellectual Property of Prothena, including without limitation the Work Product or any Project IP, except as expressly set forth in this Agreement.

5. REPRESENTATIONS AND WARRANTIES

5.1 By Each Party. Each Party represents and warrants to the other Party that (a) it has the full power and authority to enter into this Agreement, (b) this Agreement has been duly authorized, and (c) this Agreement is binding upon it.

5.2 By Consultant. Consultant represents and warrants that (a) entering into this Agreement and performing the Services and obligations contemplated under this Agreement would not violate any law, rule, regulation or judicial order applicable to Consultant, and would not violate or constitute a default under any agreement to which Consultant is a party, and (b) Consultant is not (i) under investigation by the U.S. Food and Drug Administration or any other governmental agency or authority that could result in any debarment, sanction or exclusion action (a "Debarment"), (ii) subject to a Debarment, or (iii) currently excluded or otherwise ineligible from participating in any governmental health care program. In the event that Consultant becomes the subject of an investigation that could result in a Debarment or becomes subject to a Debarment, Consultant shall immediately notify Prothena in writing. Upon the receipt of such notice by Prothena, or if Prothena otherwise becomes aware of such Debarment or threatened Debarment, Prothena shall have the right to terminate this Agreement immediately.

6. INDEMNIFICATION

6.1 By Consultant. Consultant shall indemnify and hold Prothena and its Affiliates, and their respective directors, officers, employees and agents (each a "Prothena Indemnitee"),

harmless from and against any and all liabilities, losses, damages or expenses of any kind, including costs and reasonable attorneys' fees (collectively, "Losses") arising out of or resulting from any third party suit, proceeding, action, claim or demand (collectively, "Claims") to the extent resulting from (a) any grossly negligent or willful act or omission by Consultant; or (b) any breach of this Agreement by Consultant. Notwithstanding the foregoing, Consultant shall not be obligated to indemnify any Prothena Indemnitee to the extent that the applicable Claim is subject to Prothena's indemnification obligations under Section 6.2 below.

6.2 By Prothena. Prothena shall indemnify and hold Consultant harmless from any and all Losses arising out of or resulting from Claims to the extent resulting from (a) any grossly negligent or willful acts or omissions by Prothena or any of its directors, officers, employees or agents, or (b) any breach of this Agreement by Prothena. Notwithstanding the foregoing, Prothena shall not be obligated to indemnify Consultant to the extent that the applicable Claim is subject to Consultant's indemnification obligations under Section 6.1 above.

7. TERM AND TERMINATION

7.1 Term. The term of this Agreement (the "Term") shall commence as of the Effective Date and shall terminate on September 30, 2024, unless terminated earlier pursuant to Section 7.2 below.

7.2 Termination. Either Party may terminate this Agreement by providing at least ten (10) business days prior written notice to the other Party.

7.3 Effect of Termination. Upon any termination of this Agreement:

(a) Consultant shall immediately cease all Services;

(b) Prothena shall pay to Consultant all amounts due for Services performed under this Agreement;

(c) Consultant shall return or destroy, at Prothena's election, Prothena's Confidential Information; and

(d) Consultant shall promptly deliver to Prothena the Work Product, or at Prothena's instruction, destroy the Work Product.

7.4 Survival. Sections 1.3, 3, 4, 6, 7.3 and 8 shall survive any termination of this Agreement.

8. MISCELLANEOUS

8.1 Entire Agreement; Amendments. This Agreement contains the entire understanding of the Parties with respect to the subject matter herein and supersedes all previous agreements (oral and written), negotiations and discussions. The Parties may modify or amend the provisions hereof only in a writing duly executed by authorized representatives of the Parties.

8.2 Remedies. If (a) Consultant's Services fail to meet standards set forth in this Agreement, (b) Consultant fails to provide appropriate and timely Services, or (c) Consultant commits any other material error in performance of the Services, Prothena shall in its sole discretion have the right, in addition to any other remedy it may have at law or equity, to (i) require that the applicable Services be remedied or re-performed without charge to Prothena, or (ii) set off the costs of the loss, damage or defect against monies owed to Consultant and/or require Consultant to provide a refund of all amounts paid for such Services.

8.3 Notices. All legal notices from one Party to the other will be in writing and will be given by addressing the same to the applicable address set forth below, or at such other address as either may specify in writing to the other. Notices shall be sent by overnight courier, certified mail with return receipt requested, or by other means of delivery requiring an acknowledged receipt. For purposes of clarity, notice may be provided via electronic mail with read receipt requested. All notices shall be effective upon receipt.

To Prothena: Prothena Biosciences Inc
331 Oyster Point Boulevard
South San Francisco, CA 94080, U.S.A.
Attention: Chief Legal Officer

To Consultant: Dennis J. Selkoe, M.D.

8.4 Assignment. This Agreement and the Services contemplated hereunder are personal to Consultant and Consultant shall not assign, transfer or subcontract any of Consultant's obligations under this Agreement without the prior written consent of Prothena. Any attempted assignment, transfer or subcontracting in violation hereof shall be null and void. The Company may freely assign this Agreement, and Consultant expressly agrees that any intellectual property rights licensed to the Company are transferable to the Company's assignee without Consultant's consent.

8.5 Waiver. No waiver by either Party of any obligation under this Agreement, or non-performance thereof, of the other Party shall constitute a waiver of any other obligation or non-performance of such other Party.

8.6 Severability. If any provision of this Agreement is declared void or unenforceable, such provision shall be deemed modified to the extent necessary to allow enforcement, and all other portions of this Agreement shall remain in full force and effect.

8.7 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to any conflicts of laws principles thereof.

8.8 Arbitration. To ensure rapid and economical resolution of any disputes unrelated to patent rights regarding this Agreement, in the event any dispute is not resolved by action taken under Section 8.2 above, the Parties hereby agree that any and all claims, disputes or controversies of any nature whatsoever arising out of, or relating to, this Agreement, or its interpretation, enforcement, breach, performance or execution, or services thereunder, shall be resolved, to the fullest extent permitted by law, by final, binding and confidential arbitration in San Francisco, CA under the then applicable American Arbitration Association arbitration rules. The Parties each acknowledge that by agreeing to this arbitration procedure, they waive the right to resolve any such dispute, claim or demand through a trial by jury or judge or by administrative proceeding. The Parties will share the costs of arbitration equally. Both Parties will be responsible for their own attorney's fees, and the arbitrator may not award attorney's fees unless a statute or contract at issue specifically authorizes such an award. Nothing in this Agreement is intended to prevent either Party from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any arbitration. With respect to injunctive relief, the Parties agree to personal jurisdiction and venue in the state or federal courts of San Francisco, California. With respect to any dispute relating to patent rights, including without limitation the validity, enforceability or scope of any patent, the laws of the applicable country of the patent shall govern and the courts of such applicable country shall have jurisdiction with regard to any patent dispute.

8.9 Execution. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same document. This Agreement may be executed electronically (including PDF). The Parties agree that electronic copies of signatures have the same effect as original signatures.

(Signature Page Follows)

IN WITNESS WHEREOF, this Agreement has been executed by the Parties hereto effective as of the Effective Date.

PROTHENA BIOSCIENCES INC **DENNIS J. SELKOE, M.D.**

By: /s/ Gene G. Kenney By: /s/ Dennis J. Selkoe
Name: Gene G. Kinney, Ph.D. Date: October 19, 2023
Title: President and Chief Executive Officer
Date: October 20, 2023

[Signature Page to Consulting Agreement]

Exhibit 10.2

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT THE REGISTRANT TREATS AS PRIVATE OR CONFIDENTIAL.

GLOBAL LICENSE AGREEMENT

by and among

PROTHENA BIOSCIENCES LIMITED

and

CELGENE SWITZERLAND LLC

Dated as of July 5, 2023

TABLE OF CONTENTS

LIST OF SCHEDULES

GLOBAL LICENSE AGREEMENT

This **GLOBAL LICENSE AGREEMENT** (this "**Agreement**") is entered into and made effective as of July 5, 2023 (the "**Effective Date**") by and between **Prothena Biosciences Limited**, an Irish limited company ("**Prothena**") and **Celgene Switzerland LLC**, a Delaware limited liability company ("**Celgene**"). Celgene and Prothena are each referred to herein by name or as a "**Party**" or, collectively, as the "**Parties**".

RECITALS

WHEREAS, Prothena and Celgene entered into that certain Master Collaboration Agreement, dated as of March 20, 2018 (the "**Master Collaboration Agreement**"), pursuant to which, among other things, Prothena has conducted research and development programs with respect to certain targets (each, a "**Program**") and Celgene has an exclusive option to obtain an exclusive license to research, develop, manufacture and commercialize Antibodies that Target such targets;

WHEREAS, pursuant to the terms of the Master Collaboration Agreement, upon exercise by Celgene of its Phase 1 Option (as defined in the Master Collaboration Agreement) with respect to a given Program, the Parties are obligated to enter into a Global License Agreement with respect to such Program;

WHEREAS, Celgene has exercised its Phase 1 Option (as defined in the Master Collaboration Agreement) with respect to the Licensed Program, and, as such, the Parties are entering into this Agreement pursuant to which, among other things, Prothena grants to Celgene exclusive rights and licenses with respect to the research, development, manufacture and commercialization of Licensed Antibodies and Licensed Products in the Territory, on the terms and subject to the conditions set forth herein; and

WHEREAS, Celgene and Prothena have previously entered into that certain U.S. License Agreement with respect to the Licensed Program (the "**Licensed Program U.S. License Agreement**"), and, pursuant to the terms of the Licensed Program U.S. License Agreement, such Licensed Program U.S. License Agreement automatically terminates upon entering into this Agreement, and the Parties intend for this Agreement to supersede the Licensed Program U.S. License Agreement.

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements set forth below, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1
DEFINITIONS

Unless specifically set forth to the contrary herein, the following terms shall have the respective meanings set forth below. Capitalized terms used, but not defined, herein will have the meanings ascribed to them in the Master Collaboration Agreement.

1.1 "**Accounting Standards**" means U.S. generally accepted accounting principles ("**GAAP**") or, to the extent that Celgene adopts International Financial Reporting Standards ("**IFRS**"), then "Accounting Standards" shall mean IFRS, in either case consistently applied.

1.2 "**Affiliate**" means any Person which, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with another Person. For purposes of this definition, the term "control" (including, with correlative meanings, the terms "controlled by" and "under common control with") as used with respect to a Person means (a) direct or indirect ownership of fifty percent (50%) or more of the voting securities or other voting interest of any Person (including attribution from related parties), or (b) the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through ownership of voting securities, by contract, as a general partner, as a manager, or otherwise.

1.3 "**Annual Net Sales**" means, on a Licensed Product-by-Licensed Product basis, total Net Sales by Celgene, its Affiliates and Sublicensees in the Territory of such Licensed Product in a particular Calendar Year, calculated in accordance with Accounting Standards consistently applied.

1.4 "**Antibody**" means any [***] antibody (including [***]), [***] whether human, humanized, chimeric, murine, synthetic or from any other source.

1.5 "**Applicable Law**" or "**Applicable Laws**" means all applicable laws, statutes, rules, regulations, orders, judgments or ordinances having the effect of law of any national, multinational, federal, state, provincial, county, city or other political subdivision, including, to the extent applicable, GCP, GLP and GMP, as well as all applicable data protection and privacy laws, rules and regulations, including, to the extent applicable, the United States Department of Health and Human Services privacy rules under the Health Insurance Portability and Accountability Act ("**HIPAA**") and the Health Information Technology for Economic and Clinical Health Act and the General Data Protection Regulation (2016/679).

1.6 "**Biomarker**" means a parameter or characteristic in a patient or Patient Sample, the measurement of which is useful (a) for purposes of selecting appropriate therapies or patient populations or monitoring disease susceptibility, severity or state, or monitoring therapies for such patient and/or (b) for predicting the outcome of a particular treatment of such patient.

1.7 "**Biosimilar Application**" means an application or submission filed with a Regulatory Authority for marketing authorization of a Biosimilar Product.

1.8 **"Biosimilar Product"** means, with respect to a given Licensed Product, a biological product (a) that contains (i) an identical active ingredient(s) as the Licensed Antibody in such Licensed Product, or (ii) a "highly similar" active ingredient(s) to the Licensed Antibody in such Licensed Product, as the phrase "highly similar" is used in 42 U.S.C. § 262(i)(2), and subject to the factors set forth in FDA's Guidance for Industry, "Quality Considerations in Demonstrating Biosimilarity to a Reference Protein Product," (February 2012), at Section VI, or any successor FDA guidance thereto, (b) for which Regulatory Approval is obtained by referencing Regulatory Materials of such Licensed Product, (c) is approved for use in such country (or region) pursuant to a Regulatory Approval process governing approval of interchangeable or biosimilar biologics as described in 42 U.S.C. §§ 262, or a similar process for Regulatory Approval in any country (or region) outside the United States, or any other similar provision that comes into force, or is the subject of a notice with respect to such Licensed Product under 42 U.S.C. § 262(l)(2) or any other similar provision that comes into force in such country (or region), and (d) is sold in the same country as such Licensed Product by any Third Party that is not a Sublicensee of Celgene or its Affiliates with respect to the Prothena IP and did not purchase such product in a chain of distribution that included any of Celgene or any of its Affiliates or its Sublicensees.

1.9 "**BPCIA**" means Biologics Price Competition and Innovation Act of 2009, as amended.

1.10 "**Business Day**" means a day on which banking institutions in New York City, New York, are open for business, excluding any Saturday or Sunday.

1.11 "**Calendar Quarter**" means the period beginning on the Effective Date and ending on the last day of the calendar quarter in which the Effective Date falls, and thereafter each successive period of three (3) consecutive calendar months ending on the last day of March, June, September, or December, respectively; provided that the final Calendar Quarter shall end on the last day of the Term.

1.12 "**Calendar Year**" means the period beginning on the Effective Date and ending on December 31 of the calendar year in which the Effective Date falls, and thereafter each successive period of twelve (12) consecutive calendar months beginning on January 1 and ending on December 31; provided that the final Calendar Year shall end on the last day of the Term.

1.13 "**Celgene IP"** means Patents and Know-How owned or otherwise controlled (through license or otherwise, but excluding through grant of a license from Prothena to Celgene pursuant to this Agreement) by Celgene or any of its Affiliates (including any Know-How that is created, conceived, discovered, first generated, invented, first made or first reduced to practice by or on behalf of Celgene or any of its Affiliates pursuant to the conduct of activities under this Agreement). For the avoidance of doubt, Celgene IP excludes (i) Know-How that is created, conceived, discovered, first generated, invented, first made or first reduced to practice by or on behalf of Prothena, solely or jointly with a Third Party; (ii) Joint Program IP (as defined under the Master Collaboration Agreement); (iii) [***], and (iv) Joint IP.

1.14 "**Change of Control**" in respect of a Person (an "**Acquired Person**") shall be deemed to have occurred upon any of the following occurring after the Effective Date: (i) any Person or group of Persons that is not an Affiliate of such Acquired Person becomes the beneficial owner (directly or indirectly) of more than fifty percent (50%) of the voting shares of such Acquired Person; (ii) such Acquired Person consolidates with or merges into or with another Person that is not an Affiliate of such Acquired Person pursuant to a transaction in which more than fifty percent (50%) of the voting shares of the acquiring or resulting entity outstanding immediately after such consolidation or merger is not held by the holders of the outstanding voting shares of such Acquired Person immediately preceding such consolidation or merger; and/or (iii) that Acquired Person sells or transfers to another Person that is not an Affiliate of such Acquired Person all or substantially all of its assets.

1.15 "**Clinical Trial**" means a human clinical trial, including any Phase 1 Clinical Trial, Phase 2 Clinical Trial or Registration Enabling Clinical Trial, any study incorporating more than one of these phases, or any human clinical trial commenced after Regulatory Approval.

1.16 "**Commercialization**" means any and all activities directed to the commercialization of a product (which may include related diagnostic products, if applicable), including commercial manufacturing (including Manufacturing) and commercial supply of a product, marketing, detailing, promotion, market research, distributing, order processing, handling returns and recalls, booking sales, customer service, administering and commercially selling such product, importing, exporting and transporting such product for commercial sale, and seeking of pricing and reimbursement of a product (if applicable), whether before or after Regulatory Approval has been obtained (including making, having made, using, importing,

selling and offering for sale such product (or related diagnostic product, if applicable)), as well all regulatory compliance with respect to the foregoing. For clarity, "Commercialization" does not include any Clinical Trial commenced after Regulatory Approval. When used as a verb, "**Commercialize**" means to engage in Commercialization.

1.17 "**Commercially Reasonable Efforts**" means, with respect to Celgene in relation to an obligation under this Agreement with respect to a Licensed Antibody or Licensed Product, such efforts that are consistent with the efforts and resources normally used by Celgene in the exercise of its commercially reasonable business practices relating to performance of an obligation for a similar pharmaceutical compound or product (including the research, development, manufacture and commercialization of a pharmaceutical compound or product), as applicable, at a similar stage in its research, development or commercial life as the relevant Licensed Antibody or Licensed Product, and that has commercial and market potential similar to the relevant Licensed Antibody or Licensed Product, taking into account issues of intellectual property coverage, safety and efficacy, stage of development, product profile, competitiveness of the marketplace, proprietary position, regulatory exclusivity, anticipated or approved labeling, present and future market and commercial potential, the likelihood of receipt of Regulatory Approval, profitability (including pricing and reimbursement status achieved or likely to be achieved), amounts payable to licensors of patents or other intellectual property rights, [***] and legal issues.

1.18 "**Confidential Information**" means, with respect to a Party, all confidential and proprietary information and materials, including Know-How, marketing plans, strategies, and customer lists, in each case, that are disclosed by or on behalf of such Party to the other Party pursuant to this Agreement, regardless of whether any of the foregoing are marked "confidential" or "proprietary" or communicated to the other Party by or on behalf of the disclosing Party in oral, written, visual, graphic or electronic form.

1.19 "**Control**", "**Controls**" or "**Controlled**" means, with respect to any intellectual property (including Know-How) or Confidential Information, the ability of a Party or its Affiliates, as applicable, (whether through ownership or license (other than a license granted in this Agreement)) to grant to the other Party the licenses or sublicenses as provided herein, or to otherwise disclose such intellectual property or Confidential Information to the other Party, without violating the terms of any then-existing agreement with any Third Party at the time such Party or its Affiliates, as applicable, would be required hereunder to grant the other Party such license or sublicenses as provided herein or to otherwise disclose such intellectual property or Confidential Information to the other Party.

1.20 "**Cover**", "**Covering**" or "**Covered**" means, with reference to a Patent claim, that such Patent has a Valid Claim that claims [***], and that the sale of a Licensed Antibody (or product incorporating such Licensed Antibody) would infringe such Valid Claim in the country in which such activity occurs without a license thereto (or ownership thereof); provided, that with respect to method of use, such method of use is for an Indication for which Regulatory Approval has been received (as set forth on the approved labeling for the applicable Licensed Product incorporating such Licensed Antibody) for such Licensed Antibody in such country.

1.21 **"Derivative"** means, with respect to a Licensed Target, [***] thereof.

1.22 "**Development**" means (i) research activities (including drug discovery, identification and/or synthesis) with respect to a product (which may include related diagnostic products, if applicable), and/or (ii) preclinical and clinical drug development activities, and other development activities, with respect to a product (which may include related diagnostic products,

if applicable), including test method development and stability testing, toxicology, formulation, process development, qualification and validation, manufacture scale-up, development-stage manufacturing (including Manufacturing), quality assurance/quality control, Clinical Trials (including Clinical Trials and other studies commenced after Regulatory Approval), statistical analysis and report writing, the preparation and submission of INDs and MAAs, regulatory affairs with respect to the foregoing and all other activities necessary or useful or otherwise requested or required by a Regulatory Authority or as a condition or in support of obtaining or maintaining a Regulatory Approval. When used as a verb, "**Develop**" means to engage in Development.

1.23 "**Diagnostic Product**" means, on a Licensed Product-by-Licensed Product basis, any diagnostic product (which may include a Licensed Antibody or Licensed Product being used as a diagnostic product) which is necessary or reasonably useful (a) for [***] in a patient or Patient Sample, and/or (b) to [***] in a patient or Patient Sample, and/or (c) to [***] to achieve improved safety or effectiveness, and/or (d) [***], in each case of (a), (b) (c), and (d), which is intended for use or is Developed or approved for use in connection with a therapeutic Licensed Antibody or Licensed Product (which may include [***]). Without limiting the foregoing, Diagnostic Products shall include "Companion Diagnostics" for a pharmaceutical product as defined in FDA's "*Guidance for Industry and Food and Drug Administration Staff – In Vitro Companion Diagnostic Devices*" as well as complementary diagnostics.

1.24 "**Dollars**" or **"$"** means the legal tender of the United States.

1.25 "**EU**" means all countries that are officially recognized as member states of the European Union at any particular time.

1.26 "**Executive Officers**" means in the case of Prothena, Prothena's Chief Executive Officer and in the case of Celgene, Celgene's Executive Vice President, Chief Medical Officer and Head of Development(or such Executive Vice President's designee).

1.27 "**Existing IND**" means the IND for the conduct of Phase 1 Clinical Trials under the Licensed Program as more particularly identified on Schedule 1.27.

1.28 "**Existing Program Agreements**" means any agreement between Prothena (or its Affiliates, as applicable) and any Third Party solely related to the Development or Manufacture of any Licensed Antibodies or Licensed Products, in effect as of the Effective Date, as set forth on Schedule 1.28.

1.29 "**Field**" means any and all uses or purposes, including the treatment, prophylaxis, palliation, diagnosis or prevention of any human or animal disease, disorder or condition.

1.30 "**First Commercial Sale**" means, on a Licensed Product-by-Licensed Product and country-by-country basis, the first sale of such Licensed Product in such country for use or consumption by the general public (following receipt of all Regulatory Approvals that are required in order to sell such Licensed Product in such country) and for which any of Celgene or its Affiliates or Sublicensees has invoiced sales of Licensed Products in the Territory; provided, however, that the following shall not constitute a First Commercial Sale: (a) any sale to an Affiliate or Sublicensee, unless the Affiliate or Sublicensee is the last Person in the distribution chain of the Licensed Product; or (b) any use of such Licensed Product in Clinical Trials or non-clinical development activities with respect to such Licensed Product by or on behalf of a Party, or disposal or transfer of such Licensed Product for a bona fide charitable purpose, compassionate use or samples.

1.31 "**Global License Agreement**" means each Global License Agreement entered into between the Parties (or their respective Affiliates, as applicable) pursuant to the Master Collaboration Agreement. When used in this Agreement, references to Global License Agreements are references to Global License Agreements other than this Agreement.

1.32 "**Good Clinical Practices**" or "**GCP**" means the applicable then-current ethical and scientific quality standards for designing, conducting, recording, and reporting trials that involve the participation of human subjects as are required by applicable Regulatory Authorities or Applicable Law in the relevant jurisdiction, including in the United States, Good Clinical Practices established through FDA guidances, and, outside the United States, Guidelines for Good Clinical Practice – ICH Harmonized Tripartite Guideline (ICH E6).

1.33 "**Good Laboratory Practices**" or "**GLP**" means the applicable then-current good laboratory practice standards as are required by applicable Regulatory Authorities or Applicable Law in the relevant jurisdiction, including in the United States, those promulgated or endorsed by the FDA in U.S. 21 C.F.R. Part 58, or the equivalent thereof as promulgated or endorsed by the applicable Regulatory Authorities outside of the United States.

1.34 "**Good Manufacturing Practices**" or "**GMP**" means all applicable standards relating to manufacturing practices for fine chemicals, intermediates, bulk products and/or finished pharmaceutical products, as are required by applicable Regulatory Authorities or Applicable Law in the relevant jurisdiction, including, as applicable, (a) all applicable requirements detailed in the FDA's current Good Manufacturing Practices regulations, U.S. 21 C.F.R. Parts 210 and 211, (b) all applicable requirements detailed in the EMA's "The Rules Governing Medicinal Products in the European Community, Volume IV, Good Manufacturing Practice for Medicinal Products", and (c) all Applicable Laws promulgated by any Governmental Authority having jurisdiction over the manufacture of the applicable compound or pharmaceutical product, as applicable.

1.35 "**Governmental Authority**" means any (a) federal, state, local, municipal, foreign or other government, (b) governmental or quasi-governmental authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, board, instrumentality, officer, official, representative, organization, unit, body or entity and any court or other tribunal), (c) multinational governmental organization or body or (d) entity or body exercising, or entitled to exercise, any executive, legislative, judicial, administrative, regulatory, police, military or taxing authority or power of any nature.

1.36 "**IND**" means an investigational new drug application (including any amendment or supplement thereto) submitted to the FDA pursuant to U.S. 21 C.F.R. Part 312, including any amendments thereto. References herein to IND shall include, to the extent applicable, any comparable filing(s) outside the U.S. for the investigation of any product in any other country or group of countries (such as a Clinical Trial Application in the EU).

1.37 "**Indication**" means an entirely separate and distinct disease or medical condition in humans [***]. For clarity, [***].

1.38 "**Initiation**" means, with respect to a given Clinical Trial, the administration of the first dose of Licensed Product to the first properly enrolled subject in such Clinical Trial in accordance with the protocol for such Clinical Trial.

1.39 "**In-License Agreements**" means any agreement between Prothena (or its Affiliates, as applicable) and any Third Party pursuant to which such Third Party licenses to

Prothena (or its Affiliates, as applicable) any Patents or Know-How included in the Prothena IP, including those set forth on Schedule 1.39.

1.40 "**Know-How**" means all proprietary (a) information, techniques, technology, practices, trade secrets, inventions, methods (including methods of use or administration or dosing), knowledge, data, results and software and algorithms, including pharmacological, toxicological and clinical test data and results, compositions of matter, chemical structures and formulations, sequences, processes, formulae, techniques, research data, reports, standard operating procedures, batch records, manufacturing data, analytical and quality control data, analytical methods (including applicable reference standards), assays and research tools, in each case, whether patentable or not; and (b) tangible manifestations thereof, including any and all of the foregoing relating to Licensed Program Biological and Chemical Materials.

1.41 "**Licensed Antibody**" means (a) any Licensed Program Antibody and (b) any other Antibody that is a variant, fragment, derivative or other modification of a Licensed Program Antibody, that (i) Targets the Licensed Target, (ii) is made by or on behalf of Celgene or its Affiliates or Sublicensees during the Term in the course of its activities performed under this Agreement (or during the term of the Licensed Program U.S. License Agreement in the course of its activities performed thereunder) and (iii) is claimed (or was claimed in an issued Patent that has subsequently expired) as a composition of matter in a Licensed Program Patent set forth on Schedule 1.46(b), a Prothena Licensed Collaboration Patent set forth onSchedule 1.63, or Joint Program Patent (as defined in the Master Collaboration Agreement) as applicable, or any substitutions, divisionals, continuations, continuations-in-part, reissues, renewals, registrations, confirmations, re-examinations, extensions, supplementary protection certificates and the like of any such Licensed Program Patents, Prothena Licensed Collaboration Patents or Joint Program Patents (as defined in the Master Collaboration Agreement).

1.42 "**Licensed Product**" means any product that constitutes, incorporates, comprises or contains a Licensed Antibody, whether or not as the sole active ingredient, and in all forms, presentations, and formulations (including manner of delivery and dosage). For clarity, different forms, formulations, presentations or dosage strengths of a given Licensed Product that constitute, incorporate, comprise or contain the same Licensed Antibody shall be considered the same Licensed Product for purposes of this Agreement. Licensed Products shall include, in all cases, any Licensed Program Product.

1.43 "**Licensed Program**" means the Development program undertaken by or on behalf of Prothenapursuant to the Master Collaboration Agreement with respect to the Licensed Target.

1.44 "**Licensed Program Antibody**" means, with respect to the Licensed Program, (i) the Collaboration Candidates (as defined in the Master Collaboration Agreement) that Target the Licensed Target and that were Developed under such Licensed Program pursuant to the Master Collaboration Agreement, including those as set forth on Schedule 1.44 and (ii) all Related Antibodies with respect to any Antibody described in the foregoing clause (i) provided that such Related Antibodies are claimed (or were claimed in an issued Patent that has subsequently expired) as a composition of matter in a Licensed Program Patent set forth on Schedule 1.46(b), a Prothena Licensed Collaboration Patent set forth onSchedule 1.63, or a Joint Program Patent (as defined in the Master Collaboration Agreement) as applicable, or any substitutions, divisionals, continuations, continuations-in-part, reissues, renewals, registrations, confirmations, re-examinations, extensions, supplementary protection certificates and the like of any such Licensed Program Patents or Prothena Licensed Collaboration Patents. For the avoidance of doubt, Licensed Program Antibodies are included within the definition of Licensed Antibody.

1.45 "**Licensed Program Biological and Chemical Materials**" means, with respect to the Licensed Program, any and all compositions of matter, cells, cell lines, assays, animal models, imaging agents, Patient Samples, Biomarkers and any other physical, biological or chemical material, that are Controlled by Prothena or its Affiliates and [***], the Licensed Target or Licensed Program Antibodies (or the Development, Manufacture or Commercialization thereof), including physical embodiments of the Licensed Program Antibodies and any diagnostics related to such Licensed Program Antibodies, in each case, (i) created, conceived, discovered, first generated, invented, first made or first reduced to practice by or on behalf of Prothena or its Affiliates, whether solely or jointly with any Third Party, in such Licensed Program under the Master Collaboration Agreement or (ii) otherwise utilized by or on behalf of Prothena or its Affiliates in the Licensed Program under the Master Collaboration Agreement. To the extent the Licensed Program Biological and Chemical Materials were created, conceived, discovered, first generated, invented, first made or first reduced to practice under the Licensed Program under the Master Collaboration Agreement, such Licensed Program Biological and Chemical Materials shall be "Licensed Program Know-How" hereunder, and to the extent the Licensed Program Biological and Chemical Materials were not created, conceived, discovered, first generated, invented, first made or first reduced to practice under the Licensed Program under the Master Collaboration Agreement, but were otherwise utilized in the development of the Licensed Program under the Master Collaboration Agreement, such Licensed Program Biological and Chemical Materials shall be "Prothena Licensed Collaboration Know-How" hereunder.

1.46 "**Licensed Program IP**" means, collectively:

(a) "**Licensed Program Know-How**" which means any and all Know-How that was created, conceived, discovered, first generated, invented, first made or first reduced to practice, in each case (i) by or on behalf of [***], (ii) by or on behalf of [***], or (iii) by or on behalf of [***]. For the avoidance of doubt, Licensed Program Know-How (i) includes 'Program Know-How' (as defined in the Master Collaboration Agreement) related to the Licensed Program but (ii) expressly excludes any Know-How created, conceived, discovered, first generated, invented, first made or first reduced to practice in the course of activities performed under this Agreement or the Licensed Program U.S. License Agreement, and any Joint Program Know-How (as defined in the Master Collaboration Agreement); and

(b) "**Licensed Program Patents**" which means any Patents in the Territory Controlled by Prothena or its Affiliates that claim or cover any Licensed Program Know-How, including the Patents set forth on Schedule 1.46(b). For the avoidance of doubt, Licensed Program Patents, include 'Program Patents' (as defined in the Master Collaboration Agreement) related to the Licensed Program, but expressly exclude Joint Program Patents (as defined in the Master Collaboration Agreement).

1.47 "**Licensed Program Product**" means, with respect to the Licensed Program, any product that constitutes, incorporates, comprises or contains a Licensed Program Antibody, whether or not as the sole active ingredient, and in all forms, presentations, and formulations (including manner of delivery and dosage). For clarity, different forms, formulations, presentations or dosage strengths of a given Licensed Program Product that constitutes, incorporates, comprises or contains the same Licensed Program Antibody shall be considered the same Licensed Program Product for purposes of this Agreement. For the avoidance of doubt, Licensed Program Products are included within the definition of Licensed Products.

1.48 "**Licensed Target**" means the target set forth on Schedule 1.48, including Derivatives thereof.

1.49 [***].

1.50 "**Manufacture**" means all activities related to the manufacturing of a product or diagnostic product or, in either case, any component or ingredient thereof, including test method development and stability testing, formulation, process development, manufacturing scale-up whether before or after Regulatory Approval, manufacturing any product or diagnostic product in bulk or finished form for Development or Commercialization (as applicable), including filling and finishing, packaging, labeling, shipping and holding, in-process and finished product testing, release of a product or diagnostic product or, in either case, any component or ingredient thereof, quality assurance and quality control activities related to manufacturing and release of a product or diagnostic product, and regulatory activities related to any of the foregoing.

1.51 "**Marketing Authorization Application**" or "MAA" means a Marketing Authorization Application, Biologics License Application or similar application, as applicable, and all amendments and supplements thereto, submitted to the FDA, or any equivalent filing in a country or regulatory jurisdiction other than the U.S. with the applicable Regulatory Authority, to obtain marketing approval for a pharmaceutical or diagnostic product, in a country or in a group of countries.

1.52 "**Net Sales**" means, in respect of a given Licensed Product, the total [***] amounts [***] for all sales of such Licensed Product in the Territory for use in the Field by Celgene, its Affiliates or Sublicensees to Third Party customers (including to distributors), less the following deductions [***] so as to arrive at "net sales" under Accounting Standards as reported by Celgene, its Affiliates or Sublicensees, as applicable, in such Person's financial statements: [***]

There shall be no double counting in determining the foregoing deductions from gross amounts invoiced to calculate Net Sales. The calculations set forth in this definition of "Net Sales" shall be determined in accordance with Accounting Standards.

Sales or other transfers between Celgene and its Affiliates or Sublicensees, as well as any transfers or dispositions of any Licensed Products for [***], in each case, shall be excluded from the computation of Net Sales.

The calculations set forth in this section shall be determined in accordance with Accounting Standards. If any Licensed Product is, or is sold as part of, a Combination Product, Net Sales shall be calculated assuming that the gross sale price of each unit is equal to the product of (i) Net Sales of the Combination Product calculated as above (*i.e.*, calculated as for a non-Combination Product), and (ii) the fraction [***], where: [***].

For purposes of this definition, "**Combination Product**" means any pharmaceutical product that (a) contains two or more active ingredients, including both (1) a Licensed Antibody and (2) one or more other compounds (which may be Antibodies) but that are not a Licensed Antibody, either as a fixed dose product, co-formulated product or co-packaged product, and sold for a single price, and (b) is Developed or Commercialized, alone or together with a Third Party, by Celgene or any of its Affiliates or Sublicensees. Any vehicles, adjuvants and excipients used in conjunction with any Licensed Antibody shall not be treated as active ingredients for the purposes of this definition.

1.53 "**Patents**" means (a) all patents and patent applications in any country or supranational jurisdiction worldwide, (b) any substitutions, divisionals, continuations, continuations-in-part, reissues, renewals, registrations, confirmations, re-examinations,

extensions, supplementary protection certificates and the like of any such patents or patent applications, and (c) foreign counterparts of any of the foregoing.

1.54 "**Patient Sample**" means tissue, fluid, or cells collected from a patient, or components of the foregoing.

1.55 "**Person**" means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, governmental authority or agency, or any other entity not specifically listed herein.

1.56 "**Phase 1 Clinical Trial**" means a human clinical trial of a product that would satisfy the requirements of U.S. 21 C.F.R. Part 312.21(a) (as amended), or a similar clinical study prescribed by the Regulatory Authorities in a foreign country, and is intended to (a) determine the safety, pharmacokinetics and pharmacodynamic parameters in healthy individuals or patients, and (b) following the foregoing clause (a), further evaluate safety and pharmacokinetics (including exploration of trends of a biomarker-based or clinical endpoint-based efficacy relationship to dose which need not be designed to be statistically significant) of the product, whether or not in combination with concomitant treatment and which provides sufficient evidence of safety to be included in filings for a Phase 2 Clinical Trial or a Registration Enabling Clinical Trial with Regulatory Authorities.

1.57 "**Phase 1 Option Exercise Fee**" shall mean the Phase 1 Option Exercise Fee (as defined in the Master Collaboration Agreement) for the Licensed Program.

1.58 "**Phase 2 Clinical Trial**" means a human clinical trial of a product that would satisfy the requirements of U.S. 21 C.F.R. Part 312.21(b), as amended, and is intended to explore a variety of doses, dose response, and duration of effect, and to generate evidence of clinical safety and effectiveness for a particular Indication or Indications in a target patient population, or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States.

1.59 "**Prosecution and Maintenance**" or "**Prosecute and Maintain**" means, with regard to a Patent, the preparation, filing, prosecution and maintenance of such Patent, as well as re-examinations, reissues, appeals, and requests for patent term adjustments and patent term extensions with respect to such Patent, together with the initiation or defense of interferences, oppositions, inter partes review, derivations, re-examinations, post-grant proceedings and other similar proceedings (or other defense proceedings with respect to such Patent, but excluding the defense of challenges to such Patent as a counterclaim in an infringement proceeding) with respect to the particular Patent, and any appeals therefrom. For clarification, "Prosecution and Maintenance" or "Prosecute and Maintain" shall not include any other enforcement actions taken with respect to a Patent.

1.60 "**Prothena IP**" means the Prothena Licensed Collaboration Patents, the Prothena Licensed Collaboration Know-How, the Licensed Program Patents and the Licensed Program Know-How, as well as Prothena's (and its Affiliates') right, title and interest in and to the Joint IP and any Joint Program IP (as defined under the Master Collaboration Agreement).

1.61 "**Prothena Licensed Collaboration IP**" means all Prothena Licensed Collaboration Know-How and Prothena Licensed Collaboration Patents

1.62 "**Prothena Licensed Collaboration Know-How**" means any and all Know-How that is Controlled by Prothena or its Affiliates on or after the Effective Date that (a) is necessary

[***] to research, develop, make, have made, import, use, offer to sell, sell or otherwise exploit any Licensed Target, Licensed Program Antibody or Licensed Program Product or (b) is or was [***], including (i) any diagnostics related to any such Licensed Program Antibody or Licensed Program Product and (ii) Know-How conceived, created, discovered, first generated, invented, first made or first reduced to practice by or on behalf of a Prothena or its Affiliates, whether solely or jointly with any Third Party, in the course of activities performed under this Agreement; but expressly excluding Joint Know-How, Joint Program Know-How (as defined in the Master Collaboration Agreement) and Licensed Program Know-How.

1.63 "**Prothena Licensed Collaboration Patents**" means any and all Patents in the Territory that are Controlled by Prothena or its Affiliates on or after the Effective Date that claim or cover (a) any Licensed Target, any Licensed Program Antibody or any Licensed Program Product, or the research, development, making, having made, import, use, offering to sell, selling or other exploitation of any of the foregoing, or (b) any Prothena Licensed Collaboration Know-How; but expressly excluding Joint Patents, Joint Program Patents (as defined in the Master Collaboration Agreement) and Licensed Program Patents. Prothena Licensed Collaboration Patents shall include the Patents set forth on Schedule 1.63.

1.64 "**Prothena Platform Patent**" means a Patent within the Prothena Licensed Collaboration Patents that [***] claims the Prothena Platform Technology.

1.65 "**Prothena Platform Technology**" means [***], which shall [***]; but in any case excluding [***].

1.66 "**Registration Enabling Clinical Trial**" means (a) a human clinical trial of a product that would satisfy the requirements of U.S. 21 C.F.R. Part 312.21(c), as amended, and is intended to (i) establish that the product is safe and efficacious for its intended use, (ii) define contraindications, warnings, precautions and adverse reactions that are associated with the product in the dosage range to be prescribed, and (iii) support Regulatory Approval for such product, or (b) a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States.

1.67 "**Regulatory Approval**" means all approvals, licenses and authorizations of the applicable Regulatory Authority necessary for the marketing and sale of a pharmaceutical or diagnostic product for a particular Indication in a country or region (including separate pricing or reimbursement approvals, as necessary), and including the approvals by the applicable Regulatory Authority of any expansion or modification of the label for such Indication.

1.68 "**Regulatory Authority**" means any national or supranational Governmental Authority, including the U.S. Food and Drug Administration (and any successor entity thereto) (the "**FDA**") in the U.S., the European Medicines Agency (and any successor entity thereto) (the "**EMA**") in the EU and the Ministry of Health, Labour and Welfare of Japan, or the Pharmaceuticals and Medical Devices Agency of Japan (or any successor to either of them) as the case may be (the "**MHLW**") in Japan, or any health regulatory authority in any country or region that is a counterpart to the foregoing agencies, in each case, that holds responsibility for development and commercialization of, and the granting of Regulatory Approval for, a pharmaceutical or diagnostic product, as applicable, in such country or region.

1.69 "**Regulatory-Based Exclusivity**" means, on a Licensed Product-by-Licensed Product and country-by-country basis, that Celgene or any of its Affiliates or Sublicensees has been granted the exclusive legal right by a Regulatory Authority in such country to market and sell the Licensed Product in such country, in each case, such that market exclusivity is

maintained for Celgene (or its Affiliate or Sublicensee, as applicable) in such country with respect to such Licensed Product as a result of such grant by such Regulatory Authority.

1.70 "**Regulatory Materials**" means the regulatory registrations, applications, authorizations and approvals (including approvals of MAAs, supplements and amendments, pre- and post-approvals, pricing and reimbursement approvals, and labeling approvals), Regulatory Approvals and other submissions made to or with any Regulatory Authority for research, development (including the conduct of Clinical Trials), manufacture, or commercialization of a pharmaceutical or diagnostic product in a regulatory jurisdiction, together with all related correspondence to or from any Regulatory Authority and all documents referenced in the complete regulatory chronology for each MAA, including all Drug Master Files (if any), INDs and supplemental biologics license applications (sBLAs) and foreign equivalents of any of the foregoing. The Regulatory Materials shall include the Existing IND.

1.71 "**Related Antibody**" means, with respect to a given Antibody, any [***].

1.72 "**Royalty Term**" means, on a Licensed Product-by-Licensed Product and country-by-country basis, the period of time commencing on the First Commercial Sale of such Licensed Product in such country of sale and expiring upon the latest of (a) the first date on which there is no Valid Claim of a Patent within the Licensed Program Patents, Prothena Licensed Collaboration Patents or Joint Program Patents (as defined in the Master Collaboration Agreement), in each case, that Covers such Licensed Product in such country of sale, (b) the expiration of Regulatory-Based Exclusivity for such Licensed Product in such country of sale, and (c) the [***] year anniversary of the date of First Commercial Sale of such Licensed Product in such country of sale.

1.73 "**Safety Reason**" means [***].

1.74 "**Select Indication**" means each of the following separate and distinct Indications: [***] such other Indications as the Parties may mutually agree in writing to be expressly included as a "Select Indication" for purposes of this Agreement; provided that such indication is identified as an approved use for the applicable Licensed Product in the approved label for such Licensed Product in the applicable country.

1.75 "**Sublicensee**" means, with respect to Celgene, a Third Party to whom Celgene has granted a sublicense, either directly or indirectly, under the Prothena IP licensed to Celgene by Prothena pursuant to this Agreement, to Develop, Manufacture and/or Commercialize Licensed Antibodies and Licensed Products in the Field in the Territory, but excluding any Third Party acting as a distributor and excluding Prothena and its Affiliates.

1.76 "**Target"** means, with respect to a given Antibody and the Licensed Target, that [***]. For the purposes of the "Target" definition, "**[***]**" means [***].

1.77 "**Territory**" means worldwide.

1.78 "**Third Party**" means any Person other than Prothena or Celgene that is not an Affiliate of Prothena or of Celgene.

1.79 "**Third Party Claim**" means any and all suits, claims, actions, proceedings or demands brought by a Third Party.

1.80 "**Third Party Damages**" means all losses, costs, claims, damages, judgments, liabilities and expenses payable to a Third Party by a Party (or the Prothena Indemnitees or Celgene Indemnitees, as applicable) under a Third Party Claim (including reasonable attorneys' fees and other reasonable out-of-pocket costs of litigation in connection therewith).

1.81 "**United States**" or "**U.S.**" means the United States of America and all of its territories and possessions.

1.82 "**U.S. License Agreement**" shall mean each U.S. License Agreement entered into between the Parties (or their respective Affiliates, as applicable) pursuant to the Master Collaboration Agreement.

1.83 "**Valid Claim**" means a claim of a Patent within the Licensed Program Patents, Prothena Licensed Collaboration Patents, or Joint Program Patents (as defined in the Master Collaboration Agreement) in the Territory that has issued and has not expired, lapsed, been cancelled or abandoned, or been dedicated to the public, disclaimed, or held unenforceable, invalid, revoked or cancelled by a court or administrative agency of competent jurisdiction in an order or decision from which no appeal has been or can be taken, including through opposition, reexamination, reissue, disclaimer, inter partes review, post grant procedures or similar proceedings.

1.84 Additional Definitions. Each of the following terms has the meaning described in the corresponding section of this Agreement indicated below:

Definition:	**Section:**
Acquired Person	1.14
[***]	[***]
[***]	[***]
Acquisition Transaction	11.5.1
Active Immunotherapeutic Approaches	4.2.1
Agreement	Preamble
Celgene	Preamble
Celgene Acquired Competing Antibody	4.5.2
Celgene Exclusivity Term	4.5.1
Celgene Indemnitees	9.2
[***]	[***]
[***]	[***]
Celgene Third Party Payments	5.3.4
Combination Product	1.52
Competing Antibody	4.5.1
Competing Compound	4.1
Cure Period	10.2.1
Disclosing Party	7.1
Dispute	11.8.2
Electronic Delivery	11.12
Effective Date	Preamble

EMA	1.68
Excluded Claim	11.8.3(d)
Existing Regulatory Materials	2.2.1
FDA	1.68
Financial Transparency Laws	11.17
[***]	[***]
Force Majeure	11.3
GAAP	1.1
Grant	4.2.2
[***]	[***]
HIPAA	1.5
IFRS	1.1
Indemnitee	9.3
Indemnitor	9.3
Indirect Taxes	5.6.2(b)
Insolvency Event	10.4
Joint IP	6.6.4
Joint Know-How	6.6.4
Joint Patent	6.6.4
Licensed Program Assets	2.4
Licensed Program Confidential Information	7.11
Licensed Program Inventory	2.3.4
Licensed Program Know-How	1.46(a)
Licensed Program Non-Specific IP	7.2
Licensed Program Patents	1.46(b)
Licensed Program Specific IP	7.2
Licensed Program U.S. License Agreement	Recitals
Master Collaboration Agreement	Recitals
MHLW	1.68
[***]	[***]
[***]	[***]
[***]	[***]
Ongoing Clinical Trial	2.1.3(a)
Ongoing Prothena Development Activities	2.1.3(c)
Party or Parties	Preamble
Patent Liaison	6.7
Payee Party	5.6.2(b)
Paying Party	5.6.2(b)
Per Licensed Product Annual Net Sales	5.3.1
Program	Recitals

Prothena	Preamble
Prothena Indemnitees	9.1
Prothena Licensor	8.3.3
Prothena Ongoing Program Activities	2.1.3(d)
Prothena Reversion Antibodies	10.8.1
Publishing Party	7.8.1
Receiving Party	7.1
Regulatory Milestone Payment	5.4.1
[***]	[***]
Sales Milestone Payment	5.5.1
SEC	7.4.1(a)
Securities Regulators	7.6
Tax Benefit	5.6.2(c)
Term	10.1.1
Transaction Agreement	11.5.1
Transition Plan	2.3.6

ARTICLE 2
DEVELOPMENT, MANUFACTURE AND COMMERCIALIZATION

2.1 Development, Manufacturing and Commercialization.

2.1.1 General. From and after the Effective Date, and subject to the terms and conditions of this Agreement, (i) Celgene will have the sole right (and shall solely control, at its discretion), itself and/or with or through its Affiliates, Sublicensees or other Third Parties, to Develop, Manufacture and Commercialize Licensed Antibodies and Licensed Products in the Field in the Territory, and (ii) Prothena and its Affiliates shall not have any right to, and shall not, conduct any Development, Manufacture or Commercialization of any Licensed Antibodies or Licensed Products in the Field in the Territory.

2.1.2 Diligence. From and after the Effective Date, and subject to the terms and conditions of this Agreement, Celgene, itself and/or with or through its Affiliates, Sublicensees or other Third Parties, will use Commercially Reasonable Efforts to [***].

2.1.3 Prothena Activities in Support of Licensed Program. Notwithstanding the provisions of Section 2.1.1, as and to the extent requested by Celgene in writing, Prothena shall conduct the following activities as reasonably directed by Celgene:

(a) Ongoing Clinical Trials. If any Clinical Trial(s) that were being conducted by or on behalf of Prothena under the Licensed Program pursuant to the Master Collaboration Agreement have not been completed as of the Effective Date (an "**Ongoing Clinical Trial**"), then, at Celgene's written election, Prothena will, at its expense, either wind-down and terminate such Ongoing Clinical Trial or continue to perform such Ongoing Clinical Trial. In the event Celgene elects that an Ongoing Clinical Trial should be wound-down and terminated, Prothena shall cause such Ongoing Clinical Trial to be wound-down and terminated promptly. In the event that Celgene elects the Ongoing Clinical Trial to continue, then Prothena shall continue to be responsible for the performance of, and shall continue to perform, such

Ongoing Clinical Trial in accordance with (i) the Research Plan (as defined in the Master Collaboration Agreement) as in existence as of the Effective Date, (ii) the terms of the applicable Clinical Trial protocol as in existence as of the Effective Date (as may be amended as required by Applicable Law and applicable guidance issued from time to time by the by the relevant Regulatory Authority) and (iii) otherwise in accordance with the reasonable directions of Celgene, until completion of such Clinical Trial. In such case, the performance of such Clinical Trial by or on behalf of Prothena shall continue to be governed by the terms and conditions of the Master Collaboration Agreement as if the Licensed Program were continuing under the Master Collaboration Agreement solely with respect to such Ongoing Clinical Trial, *mutatis mutandis* (including that Know-How conceived, created, discovered, first generated, invented, first made or first reduced to practice, by or on behalf of Prothena or its Affiliates, whether solely or jointly with any Third Party, pursuant to the conduct of such Ongoing Clinical Trial, shall be Licensed Program Know-How hereunder); provided that, notwithstanding the provisions of the Master Collaboration Agreement, Celgene shall have the right to make decisions and determinations with respect to the conduct of such Ongoing Clinical Trial, and Prothena shall comply with all such reasonable decisions and determinations, provided that Celgene consults with and reasonably considers Prothena's comments with respect thereto prior to making any such decision or determination. In addition, Celgene shall have the right, at any time, to notify Prothena to cease performance of an Ongoing Clinical Trial, and in such case, Prothena shall immediately wind-down any such Ongoing Clinical Trial.

(b) Transition Supply. If Prothena was supplying (or having supplied) any Licensed Antibody and/or Licensed Product for any Clinical Trial(s) or other Development activities conducted with respect to the Licensed Program under the Master Collaboration Agreement, then, at Celgene's written request, Prothena will be responsible for supplying, and shall supply, to Celgene (or its designee) Licensed Antibody(ies) and/or Licensed Product(s), for use in Development by or on behalf of Celgene hereunder for a period not to exceed [***] (or such longer period of time as agreed to by the Parties), as and to the extent requested by Celgene; provided that Celgene shall pay to Prothena a reasonable, fair value cost for such supply, which cost shall be negotiated in good faith and agreed to by the Parties prior to such supply. In such case, at the request of Celgene, the Parties shall negotiate in good faith and enter into an appropriate supply agreement (including a quality agreement) for Prothena to supply (or have supplied) Licensed Antibody and/or Licensed Product, as applicable, to Celgene (or its designee). Notwithstanding the foregoing, if Prothena has engaged a Third Party contract manufacturer for the supply of Licensed Antibodies and/or Licensed Products, and the agreement with such Third Party prohibits the supply to Celgene in accordance with the foregoing (provided that Prothena used good faith efforts not to include such prohibition during negotiations), then in lieu of the foregoing supply obligation, Prothena shall take such actions as reasonably requested by Celgene to facilitate the negotiations between Celgene and Prothena's Third Party contract manufacturer of an appropriate supply agreement (including a quality agreement) for the supply of Licensed Antibody and/or Licensed Product, as applicable, to Celgene (or its designee).

(c) Other Continuing Development Activities. Without limiting the other obligations of Prothena hereunder (including as set forth in this Section 2.1.3), in the event that the Parties mutually agree in writing that Prothena or its Affiliates will conduct any other specific Development activities for Celgene after the Effective Date with respect to the Licensed Program (in addition to those set forth in the foregoing provisions of this Section 2.1.3) (the "**Ongoing Prothena Development Activities**"), then, in such case, the Parties shall negotiate in good faith and enter into a separate services agreement pursuant to which Prothena (or its Affiliates, as applicable) shall perform such Ongoing Prothena Development Activities.

(d) Prothena Ongoing Program Activities. Prothena's obligations as set forth in this Section 2.1.3, as applicable, are the "**Prothena Ongoing Program Activities**".

2.1.4 Celgene Progress Updates. During the Term until such time as Celgene has submitted a MAA for at least one Licensed Product in the United States and at least one country in the EU (or through centralized EU filing) for a Select Indication, Celgene and Prothena shall meet at least [***] to discuss the progress of Celgene's material Development and Commercialization activities with respect to Licensed Products pursuant to this Agreement. Such meeting shall be either in person or telephonically as agreed to by the Parties. In addition, during the Term until such time as Celgene has submitted an MAA for at least one Licensed Product in the United States or at least one country in the EU (or through centralized EU filing) for a Select Indication, at least [***] (or more frequently as agreed to by the Parties), Celgene shall submit to Prothena a written report summarizing the progress of Celgene's material Development and Commercialization activities with respect to Licensed Products pursuant to this Agreement since the last report.

2.1.5 JSC. For the avoidance of doubt, the JSC (as defined in the Master Collaboration Agreement) and each Subcommittee (as defined in the Master Collaboration Agreement) shall no longer oversee or review any of the matters under this Agreement, and shall have no decision-making authority in connection therewith.

2.2 Regulatory.

2.2.1 Transfer of Existing Regulatory Materials. Subject to Section 2.2.2, Prothena shall assign and transfer (and hereby does assign and transfer), or cause to be assigned and transferred to the extent not owned by Prothena, to Celgene (or its designee), promptly (but in all cases within [***] days) after the Effective Date any and all Regulatory Materials (including the Existing IND) for any Licensed Antibodies and/or Licensed Products held or generated by or on behalf of Prothena or its Affiliates (the "**Existing Regulatory Materials**"), including providing true, accurate and complete hard and electronic copies thereof to Celgene. Thereafter Celgene (or its designee) shall have the sole right, in its discretion, to file, maintain and hold title to, all Existing Regulatory Materials. Notwithstanding the foregoing, at the election of Celgene, Celgene may notify Prothena in writing that it does not desire to take assignment and transfer of certain Regulatory Materials (as so determined by Celgene) and in such case, Prothena shall not assign or transfer to Celgene (or its designee) such designated Regulatory Materials.

2.2.2 Prothena Ownership for Ongoing Clinical Trials. Notwithstanding the foregoing Section 2.2.1, in the event Prothena continues to be responsible for the performance of an Ongoing Clinical Trial pursuant to and in accordance with Section 2.1.3(a), Prothena will retain ownership of any Existing Regulatory Materials (including the Existing IND) for the corresponding Licensed Antibodies and Licensed Products related to such Ongoing Clinical Trial until completion of such Ongoing Clinical Trial, following which, the provisions of Section 2.2.1 shall apply with respect to such Existing Regulatory Materials.

2.2.3 Safety Information. Celgene shall have the right to report all safety information to Regulatory Authorities with respect to the Licensed Antibodies and/or Licensed Products in the Territory hereunder, provided that Prothena shall also have such right with respect to safety data arising from any Ongoing Clinical Trial prior to the transfer of Existing Regulatory Materials to Celgene pursuant to Section 2.2.2.

2.2.4 Right of Reference; Access to Data. Pending such time as the Existing Regulatory Materials are transferred and assigned to Celgene (or its designee), or in the event of failure to transfer and assign any Existing Regulatory Materials to Celgene (or its designee), as required by Section 2.2.1 or 2.2.2 (as applicable), Celgene (and its designees) shall have, and Prothena (on behalf of itself and its Affiliates) hereby grants to Celgene (and its designees), access and a right of reference (without any further action required on the part of Prothena or its Affiliates, whose authorization to file this consent with any Regulatory Authority is hereby granted) to all such Existing Regulatory Materials and all data contained or referenced in any Existing Regulatory Materials for Celgene (and its designees) to exercise its rights and perform its obligations hereunder. In all cases, Celgene (and its designees) shall have access to all data contained or referenced in any Existing Regulatory Materials, and Prothena shall ensure that Celgene (and its designees) are afforded such access.

2.2.5 Regulatory Matters. In the event that Celgene determines that any regulatory filings for any Licensed Antibodies and/or Licensed Products are required for any activities hereunder, including INDs, MAAs and other Regulatory Approvals (as applicable), then Celgene (or its designee) shall have the sole right, in its discretion, to seek to obtain and maintain such regulatory filings (in its or its designee's name). In addition, Celgene (or its designee) shall have the sole right to communicate and otherwise interact with Regulatory Authorities with respect to the Licensed Antibodies and/or Licensed Products, including with respect to any Regulatory Materials in connection therewith. Prothena (and its Affiliates) shall have no right to, and shall not, make any regulatory filings related to any Licensed Antibodies and/or Licensed Products or otherwise interact with any Regulatory Authorities with respect to the Licensed Antibodies and/or Licensed Products; provided that, as and to the extent reasonably requested by Celgene in writing, Prothena shall interact with Regulatory Authorities in connection with Licensed Antibodies and/or Licensed Products with respect to matters related to the Licensed Program activities conducted by or on behalf of Prothena under the Master Collaboration Agreement or with respect to any Prothena Ongoing Program Activities. Notwithstanding the foregoing, until such time as a given Existing Regulatory Material is assigned and transferred to Celgene in accordance with Section 2.2.1 or 2.2.2 (as applicable), Prothena shall be responsible for all communications and interactions with Regulatory Authorities with respect to such Existing Regulatory Material; provided that, in connection with any such activities by Prothena, Prothena shall, to the extent reasonably requested by Celgene, consult and coordinate with Celgene with respect thereto (including allowing Celgene to attend or participate in any meetings or other interactions with Regulatory Authorities to the extent such attendance is not prohibited or limited by such Regulatory Authority) and Prothena shall accommodate and comply with any reasonable requests made by Celgene in connection therewith (including that Prothena shall submit to Celgene a copy of any proposed filings and correspondence with any Regulatory Authority for Celgene's review and approval prior to submission thereof). At the request of Celgene, Prothena shall reasonably assist Celgene in communications and filings with Regulatory Authorities with respect to the Licensed Antibodies and/or Licensed Products.

2.2.6 Pharmacovigilance. At the written request of Celgene, within [***] days after such request, Prothena and Celgene (or its designee(s)) will enter into a pharmacovigilance agreement in order to, among other things, coordinate safety matters and share of safety information with respect to Licensed Products.

2.3 Assistance; Technology Transfer.

2.3.1 General. Prothena shall (and shall cause its Affiliates to) cooperate with Celgene (and its designees) and provide reasonable assistance to Celgene (and its designees) to

enable Celgene (and its designees) to Develop, Manufacture and Commercialize Licensed Antibodies and Licensed Products, as and to the extent requested reasonably by Celgene, including (i) conducting a technology transfer to Celgene with respect to the Licensed Program Know-How and Prothena Licensed Collaboration Know-How, (ii) providing Celgene (and its designees) reasonable assistance with respect to regulatory and Manufacturing transition matters related to Licensed Antibodies and Licensed Products and (iii) providing Celgene (and its designees) with reasonable access by teleconference or in-person (as requested by Celgene) to Prothena personnel (and personnel of its Affiliates and Third Party contractors) involved in the Development or Manufacture of Licensed Antibodies and Licensed Products to assist with the transition and answer questions related to Licensed Antibodies, Licensed Products and Diagnostic Products.

2.3.2 Additional Specific Transition Assistance. Without limiting the provisions of Section 2.3, as soon as reasonably practicable following the Effective Date (but in all cases, within [***] days after the Effective Date or such other period of time as agreed to by the Parties), and thereafter during the Term as may be reasonably requested by Celgene from time to time, Prothena shall (i) disclose to Celgene (and its designees) in English (including by providing hard and electronic copies thereof) all Licensed Program Know-How and Prothena Licensed Collaboration Know-How, including any materials and documentation (including data and protocols) included therein and any other physical embodiments thereof, (ii) transfer to Celgene (and its designees) all Licensed Program Biological and Chemical Materials, as well as [***] and Celgene and its designees shall have the full right to utilize all of the foregoing in connection with the Development, Manufacture or Commercialization of Licensed Antibodies and Licensed Products, and (iii) assist Celgene (and its designees) in responding to regulatory inquiries with respect to Licensed Program Antibodies and Licensed Program Products.

2.3.3 Manufacturing Technology Transfer. Without limiting the provisions of Sections 2.3 and 2.3.2, as soon as reasonably practicable following the Effective Date (but in all cases, within [***] days after the Effective Date or such other period of time as agreed to by the Parties), Prothena shall transfer, and thereafter continue, during the Term as may be reasonably requested by Celgene from time to time, the transfer (from Prothena, its Affiliates or its Third Party contract manufacturers) to Celgene (and its designees), copies in English (in writing and in an electronic format) of all data, information and other Know-How in the Control of Prothena or its Affiliates ([***]) that is related to the Manufacture of any Licensed Antibodies or Licensed Products, in order to enable Celgene (and its designees) to Manufacture the Licensed Antibodies and Licensed Products, including to replicate the process employed by or on behalf of Prothena to Manufacture any Licensed Antibodies and Licensed Products. Such transfer shall include all [***]. In addition, at the reasonable request of Celgene from time to time, Prothena shall make its employees and consultants (including personnel of its Affiliates and Third Party contract manufacturers) available to Celgene (and its designees) to provide reasonable consultation and technical assistance in order to ensure an orderly transition of the manufacturing technology and operations to Celgene (and its designees) and to assist Celgene (and its designees) in its Manufacture of any Licensed Antibodies and Licensed Products.

2.3.4 Inventory Transfer. At the written request of Celgene, Prothena shall promptly assign and transfer to Celgene (or its designee) and deliver to Celgene (or its designee) (at a location to be specified by Celgene to Prothena), any or all (as and to the extent requested by Celgene) inventory of Licensed Antibodies and Licensed Products held by or on behalf of Prothena or its Affiliates as of the Effective Date (including any such inventory held at any contract manufacturer or any other location); provided that Celgene shall pay to Prothena a reasonable, fair value cost for such transferred inventory, which cost shall be negotiated in good faith and agreed to by the Parties prior to such transfer (the "**Licensed Program Inventory**").

2.3.5 Assignment of Certain Existing Agreements.

(a) At the written request of Celgene, Prothena shall (or shall cause its Affiliates to, as applicable), to the extent legally permissible (provided that, to the extent consent is required from the relevant counterparty, Prothena shall (or shall cause its Affiliates to, as applicable) use reasonable efforts to obtain such consent) (i) assign to Celgene (or its designee) any or all (as designated by Celgene) Existing Program Agreements and/or (ii) assist Celgene (or its Affiliate) in entering into new agreements directly with the counterparties to the Existing Program Agreements to cover the subject matter of such Existing Program Agreements, as applicable, in each case of (i) and/or (ii), as and to the extent requested by Celgene in writing. If any Existing Program Agreement is assigned to Celgene, Prothena shall be solely responsible for, and shall indemnify and hold harmless Celgene and all other Celgene Indemnitees from and against any costs and other Third Party Damages arising from, or relating to, any such Existing Program Agreement as a result of, or in connection with, events or occurrences prior to the date of such assignment (including, for clarity, any payments that accrued prior to the date of such assignment, but which do not become payable until after the date of such assignment).

(b) [***].

2.3.6 Transition Plan. In order to facilitate the transition as set forth in this Section 2.3, at the request of Celgene, the Parties shall work together in good faith and establish a transition plan setting forth certain additional reasonable transition activities to be undertaken by or on behalf of Prothena in order to fully transition the Development, Manufacture and Commercialization of Licensed Antibodies and Licensed Products to Celgene (and its designees) (the "**Transition Plan**"). Once established, Prothena shall use commercially reasonable efforts to [***] perform its activities under the Transition Plan.

2.4 Covenant. Except as otherwise expressly permitted under this Agreement, commencing on the Effective Date until the end of the Term, Prothena shall not and shall cause its Affiliates not to (a) assign, transfer, convey, encumber(through a lien, charge, security interest, mortgage or similar encumbrance) or dispose of, or enter into any agreement with any Third Party to assign, transfer, convey, encumber (through a lien, charge, security interest, mortgage or similar encumbrance) or dispose of, any [***] (collectively, the "**Licensed Program Assets**"), except to the extent such assignment, transfer, conveyance, encumbrance or disposition would not conflict with, be inconsistent with or adversely affect in any respect any of the rights or licenses granted to Celgene hereunder, (b) license or grant to any Third Party, or agree to license or grant to any Third Party, any rights to any Licensed Program Assets if such license or grant could conflict with, be inconsistent with or adversely affect in any respect any of the rights or licenses granted to Celgene hereunder, or (c) [***] the Licensed Program Assets to any Third Party if such [***] could impair or conflict in any respect with any of the rights or licenses granted to Celgene hereunder.

2.5 Other Antibodies and Products Developed by Celgene. Notwithstanding anything to the contrary contained herein, if Celgene (or any of its Affiliates), alone or with any Third Party, determines to Develop, Manufacture or Commercialize any Antibodies (or any product containing an Antibody), other than Licensed Antibodies or Licensed Products, then Celgene may do so in its sole discretion, without any obligations to Prothena with respect thereto, and Prothena shall have no rights in connection therewith, provided that Celgene's or its Affiliates' conduct of any such activities shall not modify or obviate Celgene's obligations under this Agreement.

2.6 Licensed Program U.S. License Agreement. The Parties hereby agree and acknowledge that this Agreement supersedes the Licensed Program U.S. License Agreement in its entirety and any activities conducted under the Licensed Program U.S. License Agreement shall be deemed to have been conducted under this Agreement.

ARTICLE 3
ANTITRUST AND COMPETITION LAW COMPLIANCE

3.1 Antitrust Compliance. For the avoidance of doubt, the Parties shall continue to comply with Section 3.2 of the Master Collaboration Agreement, and such provisions shall apply to this Agreement as if set forth directly herein, *mutatis mutandis*.

ARTICLE 4
EXCLUSIVITY

4.1 Prothena Exclusivity. During the Term, Prothena shall not and shall ensure that its Affiliates shall not, anywhere in the world: (i) alone or with or through any Third Party, research [***], Develop, Manufacture or Commercialize (a) the Licensed Target or any Competing Compound, or (b) any diagnostic product intended for use, or Developed or approved for use with, the Licensed Target (including any diagnostic product intended for use, or Developed or approved for use with, any Competing Compound), in each case, other than Prothena's performance of the Prothena Ongoing Program Activities (including engaging its Affiliates or Third Party subcontractors to perform the Prothena Ongoing Program Activities in accordance with this Agreement) as specifically set forth in Section 2.1.3; (ii) grant a license, sublicense or other rights to any Third Party to conduct any of the activities in the foregoing clause (i), other than Prothena's performance of the Prothena Ongoing Program Activities (including engaging its Affiliates or Third Party subcontractors to perform the Prothena Ongoing Program Activities in accordance with this Agreement) as specifically set forth in Section 2.1.3; or (iii) transfer, assign, convey or otherwise sell any Competing Compound or any diagnostic product intended for use, or Developed or approved for use with, the Licensed Target (including any diagnostic product intended for use, or Developed or approved for use with any Competing Compound). As used herein, the term "**Competing Compound**" means [***].

4.2 Prothena Exception for Active Immunotherapeutic Approaches.

4.2.1 Exception for Active Immunotherapeutic Approaches. Notwithstanding the provisions of Section 4.1, but subject to the provisions of Section 4.2.2, Prothena and its Affiliates (themselves, but not with or through any Third Parties) may conduct research, development, manufacture and commercialization of Active Immunotherapeutic Approaches outside of this Agreement; provided that no Licensed Antibodies or Licensed Products are utilized in the conduct of any such activities (including no use of a Licensed Antibody or Licensed Product for an Active Immunotherapeutic Approach). As used herein, "**Active Immunotherapeutic Approaches**" means [***].

4.2.2 Celgene Right of First Negotiation. During the Term, in the event that Prothena or its Affiliates intends to, directly or indirectly, sublicense, assign, transfer, convey or grant other rights, however structured, to a Third Party with respect to any Active Immunotherapeutic Approaches (including any rights with respect to the Development or Commercialization of any Active Immunotherapeutic Approaches (each, a "**Grant**"), [***]. For the avoidance of doubt, this Section 4.2.2 [***]. For clarity, [***].

4.3 Master Collaboration Agreement. For the avoidance of doubt, the provisions of Article 5 of the Master Collaboration Agreement shall not limit in any way the provisions of this Article 4.

4.4 Reserved.

4.5 Celgene Exclusivity.

4.5.1 Celgene Exclusivity. During the period from the Effective Date until the [***] year anniversary of the Effective Date (the "**Celgene Exclusivity Term**"), neither Celgene nor its Affiliates will, anywhere in the world, alone or with or through any Third Party, either (a) sell any Competing Antibody that has an approved label for treatment of an Indication for which Celgene or its Affiliates has conducted a Registration Enabling Clinical Trial for a Licensed Product hereunder (as set forth in the protocol for such Registration Enabling Clinical Trial) or (b) conduct a Registration Enabling Clinical Trial for any Competing Antibody for treatment of an Indication (as set forth in the protocol for such Registration Enabling Clinical Trial) for which Celgene has conducted a Registration Enabling Clinical Trial for a Licensed Product hereunder (as set forth in the protocol for such Registration Enabling Clinical Trial) (provided that, for the avoidance of doubt, this Section 4.5.1 shall not prohibit (i) use of an Competing Antibody as a comparator in a Registration Enabling Clinical Trial or (ii) Celgene or any of its Affiliates providing proprietary products (that are not Competing Antibodies) to a Third Party for such Third Party's use in a clinical trial of Competing Antibodies), in each case of (a) and (b), other than Celgene's exercise of its rights and performance of its obligations with respect to Licensed Antibodies and Licensed Products pursuant to this Agreement (including engaging Third Party subcontractors to perform the such rights and obligations in accordance with this Agreement). As used herein, the term "**Competing Antibody**" means any Antibody that Targets the Licensed Target, including any product that incorporates any such Antibody; provided that Competing Antibody shall not include (a) any Antibody (or any product that incorporates any such Antibody) that was Developed or Commercialized by or on behalf of Celgene or any of its Affiliates prior to the Effective Date or (b) any Related Antibodies, or other improvements or modifications, to the Antibody in the foregoing clause (a) or products that incorporate such Related Antibodies or improvements or modifications.

4.5.2 Exceptions for Change of Control. Notwithstanding the provisions of Section 4.5.1, if during the Celgene Exclusivity Term, Celgene (or any of its Affiliates) undergoes a Change of Control with a Third Party who (itself or through any of its affiliates existing prior to the date of the Change of Control) owns or has rights to a Competing Antibody (but excluding any Licensed Antibody or Licensed Product) that is in ongoing clinical development or being commercialized by such Third Party (or its affiliate) as of the date of the Change of Control (a "**Celgene Acquired Competing Antibody**"), then Celgene and its Affiliates (including the acquiring Person in the Change of Control (and such acquiring Person's affiliates)) shall not be in breach of the provisions of Section 4.5.1 as a result of [***]; provided that (i) such activities are conducted independently of the activities of this Agreement and without use of any Prothena IP ([***]) and (ii) no personnel who are conducting any Registration Enabling Clinical Trial activities pursuant to this Agreement are involved in the conduct of Registration Enabling Clinical Trial activities with respect to the Celgene Acquired Competing Antibody.

ARTICLE 5
FINANCIAL TERMS

5.1 Option Exercise Fee. Subject to Section 3.2 of the Master Collaboration Agreement, the Parties acknowledge and agree that Celgene will pay the Phase 1 Option Exercise Fee (as defined in the Master Collaboration Agreement) for the Licensed Program in accordance with the Master Collaboration Agreement.

5.2 Reimbursement of Certain CMC Expenses. Subject to Section 3.2 of the Master Collaboration Agreement, Celgene will reimburse Prothena for the reasonable, documented and verifiable out-of-pocket costs that were incurred by Prothena under the Master Collaboration Agreement, after the End of Phase 1 Date (as defined in the Master Collaboration Agreement) for the Licensed Program but prior to the Effective Date of this Agreement, for chemistry, manufacturing and controls (CMC) activities conducted by Prothena specifically for preparation for any Registration Enabling Clinical Trials of Licensed Product; provided that (a) such amounts and such activities were approved in writing in advance by Celgene prior to Prothena undertaken such activities and (b) in all cases, Celgene shall not be obligated to reimburse Prothena for any such amounts in excess of $[***] ([***]). Subject to Section 3.2 of the Master Collaboration Agreement, Prothena shall promptly after the Effective Date issue an invoice to Celgene for the amounts set forth in this Section 5.2, and Celgene shall pay to Prothena the undisputed portion of such invoice within [***] days after receipt of such invoice.

5.3 Royalties.

5.3.1 Licensed Product Royalties. Subject to the terms of this Section 5.3 (and subject further to Section 5.6), Celgene shall pay Prothena royalties on Annual Net Sales, on a Licensed Product-by-Licensed Product basis during the applicable Royalty Term, equal to the following portions of Annual Net Sales of the applicable Licensed Product multiplied by the applicable royalty rate set forth below for such portion of Annual Net Sales during the applicable Royalty Term for each such Licensed Product, which royalties shall be paid in accordance with Section 5.3.7 (the "**Per Licensed Product Annual Net Sales**"). For clarity, the royalties (and royalty tiers) shall be calculated separately on a Licensed Product-by-Licensed Product basis.

Per Licensed Product Annual Net Sales for a Given Licensed Product in a Given Calendar Year	**Royalty Rate**
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%
Portion of Per Licensed Product Annual Net Sales of a given Licensed Product in a given Calendar Year above [***]	[***]%

The applicable royalty rate set forth in the table above will apply only to that portion of the Per Licensed Product Annual Net Sales of a given Licensed Product during a given Calendar Year that falls within the indicated range. For clarity, (i) if no royalty is payable on a given unit of Licensed Product (e.g., following the Royalty Term for such Licensed Product in a given country), then the Net Sales of such unit of Licensed Product shall not be included for purposes of determining the royalties or royalty tiers and (ii) Net Sales of a given Licensed Product will not be combined with Net Sales of any other Licensed Product for purposes of determining the

foregoing royalties or royalty tiers. Only one royalty shall be payable by Celgene to Prothena for each sale of a Licensed Product.

By way of example, if Per Licensed Product Annual Net Sales of a given Licensed Product by Celgene, its Affiliates and Sublicensees were $[***] for a given Calendar Year, then the royalties payable with respect to such Per Licensed Product Annual Net Sales for such Licensed Product for such Calendar Year, subject to adjustment as set forth in this Section 5.3, would be: [***].

5.3.2 Royalty Term. Celgene's royalty obligations to Prothena under Section 5.3.1 shall apply on a Licensed Product-by-Licensed Product and country-by-country basis only during the applicable Royalty Term for such Licensed Product in such country. Following expiration of the applicable Royalty Term for a given Licensed Product in a given country, as applicable, no further royalties will be payable in respect of sales of such Licensed Product in such country and thereafter the license granted to Celgene hereunder with respect to such Licensed Product in such country will automatically become fully paid-up, perpetual, irrevocable and royalty-free.

5.3.3 Reductions.

(a) Reductions for No Valid Claim. The royalty amounts payable with respect to Per Licensed Product Annual Net Sales shall be reduced on a Licensed Product-by-Licensed Product and country-by-country basis, to [***] percent ([***]%) of the amounts otherwise payable pursuant to Section 5.3.1 during any portion of the applicable Royalty Term in which both: (i) [***] and (ii) [***].

(b) Royalty Reduction for Biosimilar Product. If, on a Licensed Product-by-Licensed Product and country-by-country and Calendar Quarter-by-Calendar Quarter basis, [***]

then the royalties payable with respect to Per Licensed Product Annual Net Sales of such Licensed Product pursuant to Section 5.3.1 in such country during such Calendar Quarter shall be reduced to [***], of the royalties otherwise payable pursuant to Section 5.3.1. [***].

5.3.4 Royalty Offset for Third Party Payments. If Celgene (or any of its Affiliates or Sublicensees) obtains a right or license under intellectual property of a Third Party (whether prior to, or after, the Effective Date), where the research, development, making, using, selling, offering for sale, or importing of any Licensed Product (or any Licensed Antibody contained in such Licensed Product) by or on behalf of Celgene (or any of its Affiliates or Sublicensees) would result in a payment to such Third Party, then Celgene may deduct from the royalty payments that would otherwise have been due under Section 5.3.1 with respect to Per Licensed Product Annual Net Sales in a particular Calendar Quarter, an amount equal to [***] percent ([***]%) of [***] ("**Celgene Third Party Payments**") during such Calendar Quarter. Notwithstanding the foregoing, in no event shall the royalties payable on Per Licensed Product Annual Net Sales be reduced by more than [***] percent ([***]%) in any Calendar Quarter by operation of this Section 5.3.4 [***].

5.3.5 Cumulative Effect of Royalty Reductions and Offsets. In no event shall the royalty reductions or offsets described in Sections 5.3.3(a), 5.3.3(b) and 5.3.4, alone or together, reduce the royalties payable by Celgene for a given Calendar Quarter pursuant to Section 5.3.1 to less than [***] percent ([***]%) of the amounts otherwise payable by Celgene for a given Calendar Quarter pursuant to Section 5.3.1. [***].

5.3.6 Compulsory Licenses. If a compulsory license is granted to a Third Party with respect to a Licensed Product in any country in the Territory with a royalty rate lower than the royalty rate provided by Section 5.3.1 (as adjusted pursuant to Section 5.3.3), then the royalty rate to be paid by Celgene on Per Licensed Product Annual Net Sales in such country under Section 5.3.1 shall be reduced [***].

5.3.7 Payment of Royalties. Celgene shall: (a) within [***] days following the end of each Calendar Quarter in which a royalty payment pursuant to Section 5.3.1 accrues, provide to Prothena a report specifying for such Calendar Quarter (i) the number of Licensed Products sold that are subject to such royalty, (ii) the Per Licensed Product Annual Net Sales that are subject to such royalty, (iii) the applicable royalty rate under this Agreement, (iv) the royalty calculation and royalties payable in U.S. Dollars and (v) any reduction to the royalty applied by Celgene pursuant to any one or more of Sections 5.3.3 and 5.3.4; and (b) make the royalty payments owed to Prothena hereunder in accordance with such royalty report in arrears, within [***] days from the end of the Calendar Quarter in which such payment accrues.

5.4 Regulatory Milestones.

5.4.1 Regulatory Milestones. Subject to the terms of this Section 5.4 (and subject further to Section 5.6), Celgene will notify Prothena within [***] days following the first achievement by Celgene under this Agreement and after the Effective Date of each milestone event described below in this Section 5.4 with respect to the first (and only the first) Licensed Product to achieve such milestone event under this Agreement, and Celgene shall thereafter pay the applicable amounts set forth below associated with the applicable milestone event in accordance with Section 5.4.2 (each, a "**Regulatory Milestone Payment**"):

Regulatory Approval Milestone Event	Regulatory Milestone Payment
1. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for the first Select Indication in the U.S. issued by the FDA [***]	[***] Dollars ($[***])
2. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for the first Select Indication in the EU issued by the EMA FDA [***]	[***] Dollars ($[***])
3. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for the first Select Indication in Japan issued by the MHLW FDA [***]	[***] Dollars ($[***])
4. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for a second Select Indication [***] in the U.S. issued by the FDA FDA [***]	[***] Dollars ($[***])
5. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for a second Select Indication [***] in the EU issued by the EMA [***]	[***] Dollars ($[***])
6. Receipt under this Agreement of all Regulatory Approvals for a Licensed Product for a second Select Indication [***] in Japan issued by the MHLW [***]	[***] Dollars ($[***])

Each of the foregoing milestones in this Section 5.4.1 shall be payable a maximum of one (1) time as set forth in the foregoing chart regardless of the number of Licensed Products achieving the applicable milestone event (*i.e.*, a maximum of six (6) Regulatory Milestone Payments may be made pursuant to this Section 5.4.1), and no Regulatory Milestone Payment shall be due hereunder for subsequent or repeated achievement of such milestone event. For the avoidance of doubt, the maximum amount payable by Celgene pursuant to this Section 5.4.1 is One Hundred Eighty-Seven Million Five Hundred Thousand Dollars ($187,500,000) assuming that each of the milestone events in this Section 5.4.1 were achieved.

5.4.2 Invoice and Payment of Regulatory Milestone Payments Following receipt of notification by Celgene to Prothena that Celgene has achieved the applicable milestone event triggering a Regulatory Milestone Payment hereunder, Prothena shall invoice Celgene for the applicable Regulatory Milestone Payment, and Celgene shall pay such Regulatory Milestone Payment within [***] days after receipt of the invoice therefor.

5.5 Sales Milestones.

5.5.1 Sales Milestones. Subject to the terms of this Section 5.5 (and subject further to Section 5.6), Celgene will notify Prothena within [***] days after the end of the Calendar Quarter during which a given milestone event described below in this Section 5.5 was first achieved by Celgene under this Agreement and after the Effective Date with respect to the Licensed Products, and Celgene shall thereafter pay the applicable amounts set forth below associated with the applicable milestone event in accordance with Section 5.5.2 (each, a "**Sales Milestone Payment**"):

Sales Milestone Event	Sales Milestone Payment
First achievement of Per Licensed Product Annual Net Sales of the Licensed Products in any single Calendar Year exceeding [***] Dollars ($[***])	[***] Dollars ($[***])
First achievement of Per Licensed Product Annual Net Sales of the Licensed Products in any single Calendar Year exceeding [***] Dollars ($[***])	[***] Dollars ($[***])
First achievement of Per Licensed Product Annual Net Sales of the Licensed Products in any single Calendar Year exceeding [***] Dollars ($[***])	[***] Dollars ($[***])
First achievement of Per Licensed Product Annual Net Sales of the Licensed Products in any single Calendar Year exceeding [***] Dollars ($[***])	[***] Dollars ($[***])

Each of the foregoing milestones in this Section 5.5.1 shall be payable a maximum of one (1) time as set forth in the foregoing chart regardless of the number of times the applicable milestone event was achieved (i.e., a maximum of four (4) Sales Milestone Payments may be made pursuant to this Section 5.5.1), and no Sales Milestone Payment shall be due hereunder for subsequent or repeated achievement of such milestone event. For the avoidance of doubt, the maximum amount payable by Celgene pursuant to this Section 5.5.1 is Three Hundred Seventy-Five Million Dollars ($375,000,000) assuming that each of the milestone events in this Section 5.5.1 were achieved.

5.5.2 Invoice and Payment of Sales Milestone Payments. Following receipt of notification by Celgene to Prothena that Celgene has achieved the applicable milestone event triggering a Sales Milestone Payment hereunder, Prothena shall invoice Celgene for the applicable Sales Milestone Payment, and Celgene shall pay such Sales Milestone Payment within [***] days after receipt of the invoice therefor.

5.6 Additional Payment Terms.

5.6.1 Currency. All payments hereunder shall be made in U.S. Dollars by wire transfer to a bank designated in writing by Prothena. Conversion of sales recorded in local currencies to Dollars shall be performed in a manner consistent with Accounting Standards and Celgene's normal practices used to prepare its audited financial statements for internal and external reporting purposes.

5.6.2 Taxes; Withholding.

(a) Generally. Each Party will pay, any and all income taxes levied on account of all payments it receives under this Agreement except as otherwise provided in this Section 5.6.2.

(b) Tax Withholding. Each Party shall be entitled to deduct and withhold from any amounts payable under this Agreement such taxes as are required to be deducted or withheld therefrom under any provision of Applicable Law. The Party that is required to make such withholding (the "**Paying Party**") will (i) deduct those taxes from such payment, (ii) timely remit the taxes to the proper taxing authority, and (iii) send evidence of the obligation together with proof of tax payment to the other Party (the "**Payee Party**") on a timely basis following that tax payment; provided, however, that before making any such deduction or withholding, the Paying Party shall give the Payee Party notice of the intention to make such deduction or withholding (such notice shall include an explanation of the reason for and the calculation of the proposed deduction or withholding and shall be given before such deduction or withholding is required in order for such Payee Party to obtain reduction of or relief from such deduction or withholding). Each Party agrees to reasonably cooperate with the other Party in claiming refunds or exemptions from such deductions or withholdings under any relevant agreement or treaty which is in effect to ensure that any amounts required to be withheld pursuant to this Section 5.6.2(b) are reduced in amount to the fullest extent permitted by Applicable Law. In addition, the Parties shall cooperate in accordance with Applicable Laws to minimize indirect taxes (such as value added tax, sales tax, consumption tax and other similar taxes ("**Indirect Taxes**")) in connection with this Agreement.

(c) Tax Gross Up. Notwithstanding the foregoing, if (a) any Party redomiciles, assigns its rights or obligations or extends its rights under this Agreement, (b) as a result of such redomiciliation, assignment or extension, such Party (or its assignee) is required by Applicable Law to [***], or such redomiciliation, assignment or extension results in [***], and (c) such [***] exceed the amount of [***] that would have been applicable but for such redomiciliation, assignment or extension, then any such amount payable shall [***] so that, after making all required [***], as the case may be, the Payee Party (or its assignee) [***]. [***]. For purposes of the preceding sentence, "**Tax Benefit**" shall mean any cash refund or credit for Taxes resulting in a reduction in the amount of Taxes otherwise owed by the Payee Party as a result of [***] relating to payments by the Paying Party, as reasonably determined by Payee Party. Solely for purposes of this Section 5.6.2(c), a Party's "domicile" shall include its jurisdiction of incorporation or tax residence and a "redomiciliation" shall include a reincorporation or other action resulting in a change in tax residence of the applicable Party or its assignee, or resulting in the attribution of any amounts payable to a branch or permanent establishment located outside the country of tax residence of the applicable Party or its assignee.

(d) Tax Documentation. Prothena has provided a properly completed and duly executed IRS Form W-8BEN-E to Celgene. Prior to the receipt of any payment under this Agreement, each recipient Party (and any other recipient of payments under this Agreement) shall, to the extent it is legally permitted to, provide to the other Party, at the time or times reasonably requested by such other Party or as required by Applicable Law, such properly completed and duly executed documentation (for example, IRS Forms W-8 or W-9 or foreign equivalents) as will permit payments made under this Agreement to be made without, or at a reduced rate of, withholding for taxes.

5.7 Other Global License Agreements. For the avoidance of doubt, a Licensed Product hereunder will only be eligible for milestone and royalty payments under this Agreement, and shall not be eligible for, or counted towards, milestone or royalty payments under any other Global License Agreement (i.e., a given Licensed Product will be eligible for, and counted towards, milestone and royalty payments only under one Global License Agreement).

5.8 U.S. License Agreement. Notwithstanding the provisions of Sections 5.3, 5.4 and 5.5, in the event that Celgene (or its Affiliate) has previously paid any royalty payments or milestone payments under the Licensed Program U.S. License Agreement, then Celgene shall not be required to make payments of any royalties or milestones payable hereunder for the same net sales or same milestone event (i.e., royalties and milestones shall be payable a maximum of one time, if payable, whether achieved under this Agreement or under the Licensed Program U.S. License Agreement). By way of example, (i) if [***], and/or (ii) if a given Sales Milestone Payment (as defined in the Licensed Program U.S. License Agreement) was paid under the Licensed Program U.S. License Agreement, then no Sales Milestone Payment shall be due hereunder for the achievement of the same milestone event.

5.9 Records Retention by Celgene; Review by Prothena.

5.9.1 Records. With respect to royalty and milestone payments to be made under Sections 5.3 or 5.5 of this Agreement, Celgene agrees to keep and shall procure that its Affiliates keep, for at least [***] years from the end of the Calendar Year to which they pertain, complete and accurate records of sales by Celgene or its Affiliates (including sales by Sublicensees), as the case may be, of each Licensed Product, in sufficient detail to allow the accuracy of the payments made hereunder to be confirmed.

5.9.2 Review. Subject to the other terms of this Section 5.9.2, during the Term, at the request of Prothena, which shall not be made more frequently than [***], upon at least [***] days' prior written notice from Prothena, [***], Celgene shall permit [***] to inspect (during regular business hours) the relevant records required to be maintained by Celgene under Section 5.9.1; provided that such audit right shall not apply to records beyond [***] years from the end of the Calendar Year to which they pertain. [***]. Results of any such review shall be binding on both Parties absent manifest error. [***] shall report to Prothena only whether the particular amount being audited was accurate, and if not, the amount of any discrepancy, and [***] shall not report any other information to Prothena. Prothena shall treat the results of any [***] review of Celgene's records as Confidential Information of Celgene subject to the terms of Article 7. If any review reveals a deficiency or overpayment in the calculation and/or payment of royalties or Sales Milestone Payments by Celgene, then (a) Celgene or Prothena as applicable shall promptly pay (or refund, as applicable) the other Party the amount of such deficiency or overpayment, as applicable, and (b) if such deficiency is by more than the greater of (i) [***] or (ii) [***], Celgene shall, within [***] days after receipt of an invoice therefor, pay the reasonable out-of-pocket costs and expenses incurred by Prothena for [***] in connection with the review.

5.9.3 Records Final. Upon the expiration of [***] years following the end of a given Calendar Year, subject and without prejudice to the determination of any review commenced prior to such [***] pursuant to Section 5.9.2, the calculation of royalties and Sales Milestone Payments payable with respect to such Calendar Year shall be binding and conclusive upon Prothena, and Celgene (and its Affiliates) shall be released from any liability or accountability with respect to such royalties for such Calendar Year.

5.10 Prothena Third Party Agreements. Notwithstanding anything to the contrary herein, but subject to Section 2.3.5(b), Prothena shall be solely responsible for all costs and payments of any kind (including all upfront fees, annual payments, milestone payments and royalty payments) arising under any agreements between Prothena (or any of its Affiliates) and any Third Party (including under any In-License Agreement or other Existing Program Agreement), which costs or payments arise in connection with, or as a result of, the activities hereunder, including the Development, Manufacture or Commercialization of Licensed

Antibodies or Licensed Products unless and until such agreements have been assigned to Celgene pursuant to Section 2.3.5.

5.11 Diagnostic Products. Notwithstanding anything to the contrary contained herein, [***].

5.12 Additional Provisions. Notwithstanding anything to the contrary herein, the terms and provisions of this Article 5 are subject to Section 11.7 of the Master Collaboration Agreement and Sections 10.7 and 10.10 of this Agreement.

ARTICLE 6
LICENSES; INTELLECTUAL PROPERTY

6.1 License to Celgene. Subject to the terms and conditions of this Agreement, Prothena hereby grants to Celgene an exclusive right and license, with the right to grant sublicenses (through multiple tiers), under the Prothena IP to research, develop (including Develop), make (including Manufacture), have made (including have Manufactured), use, offer for sale, sell, import, Commercialize and otherwise exploit Licensed Antibodies and Licensed Products, including Diagnostic Products, in the Field in the Territory.

6.2 License to Celgene for Other Targets. In the event that, during the Term, Celgene modifies a Licensed Program Antibody in the course of its Development activities hereunder such that such Licensed Program Antibody specifically binds to a target other than (i) the Licensed Target or (ii) any other Collaboration Target (e.g., a bispecific antibody), then, at the request of Celgene, Celgene and Prothena shall negotiate in good faith a license under intellectual property of Prothena or its Affiliates, as applicable, that is specific to such other target or Antibodies to such other target.

6.3 Rights Retained by the Parties. For purposes of clarity, each Party retains all rights under Know-How and Patents Controlled by such Party not expressly granted to the other Party pursuant to this Agreement. In addition, Prothena retains the right to perform the Prothena Ongoing Program Activities in accordance with this Agreement.

6.4 No Implied Licenses. Except as explicitly set forth in this Agreement, the Master Collaboration Agreement, any U.S. License Agreement or any other Global License Agreement, neither Party shall be deemed by estoppel or implication to have granted to the other Party any license or other right to any intellectual property of such Party.

6.5 Insolvency. In the event that this Agreement is terminated due to the rejection of this Agreement by or on behalf of Prothena due to an Insolvency Event, all licenses and rights to licenses granted under or pursuant to this Agreement by Prothena to Celgene are and shall otherwise be deemed to be licenses of rights to “intellectual property”. The Parties agree that Celgene, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under any applicable insolvency statute, and that upon commencement of an Insolvency Event by or against Prothena, Celgene shall be entitled to a complete duplicate of or complete access to (as Celgene deems appropriate), any such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments thereof shall be promptly delivered to Celgene (i) upon any such commencement of a bankruptcy proceeding (or other Insolvency Event) upon written request therefore by Celgene, unless Prothena elects to continue to perform all of its obligations under this Agreement or (ii) if not delivered under (i) above, upon the rejection of this Agreement by or on behalf of Prothena, then upon written request therefore by Celgene. The provisions of this Section 6.5 shall be (1)

without prejudice to any rights Celgene may have arising under any applicable insolvency statute or other Applicable Law and (2) effective only to the extent permitted by Applicable Law.

6.6 Ownership.

6.6.1 Inventorship. Notwithstanding the provisions of Section 11.8.1, inventorship of Know-How shall be determined by application of U.S. patent law pertaining to inventorship, and, except as provided for in Sections 6.6.2, 6.6.3 and 6.6.4, ownership of Know-How shall be determined by inventorship.

6.6.2 Ownership of Collaboration IP and Celgene IP.

(a) Prothena. As between the Parties (including their respective Affiliates), Prothena will retain all right, title and interest in and to all Prothena Licensed Collaboration IP, except to the extent that any such rights are licensed or granted to Celgene under this Agreement or the Master Collaboration Agreement. Prothena shall [***] that all Patents, Know-How and other intellectual property (other than Licensed Program IP and Celgene IP, if any) utilized in the performance of the Licensed Program under the Master Collaboration Agreement falls within the Prothena Licensed Collaboration IP and is and remains during the Term Controlled by Prothena such that Prothena has the full rights to grant the rights and licenses to the Prothena Licensed Collaboration IP to Celgene hereunder (including that such Patents, Know-How and other intellectual property remains unencumbered such that Prothena is able to grant such rights and licenses to Celgene).

(b) Celgene. As between the Parties (including their respective Affiliates), Celgene (or its Affiliate) will retain all right, title and interest in and to all Celgene IP, including all rights to Prosecute and Maintain, and enforce any such Celgene IP, and no rights or licenses are granted to Prothena hereunder with respect to any Celgene IP.

6.6.3 Ownership of Licensed Program IP.

(a) Prothena. As between the Parties (including their respective Affiliates), Prothena will solely own and Control all Licensed Program IP. Celgene shall, and hereby does, assign to Prothena all of Celgene's interest in any and all Licensed Program Know-How that falls within Section 1.46(a)(iii) and all Licensed Program Patents claiming such Licensed Program Know-How. Celgene shall, and shall require its Affiliates to, take all reasonable actions and execute all documents necessary to effect the intent of the preceding sentence. As between the Parties (and their respective Affiliates) and any Third Party, Prothena will solely own and Control all Licensed Program IP [***].

(b) If any Licensed Program IP is created, conceived, discovered, first generated, invented, first made or first reduced to practice pursuant to the Master Collaboration Agreement by any Third Party that is in contractual privity with or otherwise engaged by Prothena [***], Prothena [***] include in such agreement with such Third Party an obligation to [***] to Prothena [***] such Licensed Program IP to enable Prothena to grant to Celgene a license thereunder as provided in this Agreement for the duration of this Agreement.

6.6.4 Joint IP. The Parties shall each own an equal, undivided interest in: (a) any and all Know-How that is created, conceived, discovered, first generated, invented, first made or first reduced to practice, in each case, jointly by or on behalf of Prothena or its Affiliates, on the one hand, and Celgene or its Affiliates, on the other hand, pursuant to the conduct of activities under this Agreement at any time during the Term (the "**Joint Know-**

How"), and (b) any Patents that claim any Joint Know-How (the "**Joint Patents**", together with Joint Know-How the "**Joint IP**"). Each Party shall assign, and hereby assigns, to the other Party, a joint equal and undivided interest in and to such Joint IP (provided, however, that for clarity, the foregoing joint ownership rights with respect to Joint IP shall not be construed as granting, conveying or creating any license or other rights to any of the other Party's other intellectual property, unless otherwise expressly set forth in this Agreement), and at the request of a Party, the other Party will execute such documents (including any necessary assignments) to effect such joint ownership of such Joint IP. Each Party shall have the right to disclose (except as otherwise set forth in Section 7.2) and exploit the Joint IP without a duty of seeking consent or accounting to the other Party except as expressly provided in this Agreement; provided that, such rights shall be subject to the rights and licenses granted to Celgene and Prothena hereunder (or under the Master Collaboration Agreement, any other Global License Agreement or any U.S. License Agreement), including the obligations of Prothena as set forth in Article 4. The Parties hereby acknowledge and agree that any and all Joint IP (as defined in the Licensed Program U.S. License Agreement) shall be deemed to be Joint IP under this Agreement, and from and after the Effective Date, the provisions of this Agreement shall apply with respect to all such Joint IP (as defined in the Licensed Program U.S. License Agreement).

6.7 Patent Liaisons. Promptly after the Effective Date, each Party shall appoint an individual to act as a patent liaison for such Party (each, a "**Patent Liaison**"). The Patent Liaisons shall be the primary point of contact for the Parties regarding intellectual property-related activities and matters contemplated by this Agreement, as and to the extent requested by Celgene from time to time. The name and contact information for each Party's Patent Liaison, as well as any replacement(s) chosen by such Party, in its sole discretion, from time to time, shall be promptly provided to the other Party in accordance with Section 11.2.

6.8 Prosecution and Maintenance of Prothena Licensed Collaboration Patents and Licensed Program Patents Following the Effective Date, the provisions of this Section 6.8 shall apply with respect to the Prothena Licensed Collaboration Patents and Licensed Program Patents.

6.8.1 Prothena Platform Patents. Prothena shall [***]Prosecute and Maintain the Prothena Platform Patents. All such Prosecution and Maintenance by Prothena shall be through patent counsel [***]. Prothena shall keep Celgene informed as to material developments with respect to the Prosecution and Maintenance of such Patents including by providing copies of all substantive office actions, examination reports, communications or any other substantive documents to or from any patent office, including notice of all interferences, reissues, re-examinations, inter partes reviews, derivations, post grant proceedings, oppositions or requests for patent term extensions. Prothena shall also provide Celgene with a reasonable opportunity to comment substantively on the Prosecution and Maintenance of such Prothena Platform Patents prior to taking material actions (including the filing of initial applications), and will in good faith consider any comments made by and actions recommended by Celgene, provided, however, that Celgene provides its comments reasonably in advance of any applicable filing deadlines.

6.8.2 Other Prothena Licensed Collaboration Patents and Licensed Program Patents

(a) [***]First Right. [***] shall have the first right (but not the obligation) to Prosecute and Maintain the Prothena Licensed Collaboration Patents (other than Prothena Platform Patents) and Licensed Program Patents using patent counsel of [***]. [***] shall keep [***] informed as to material developments with respect to the Prosecution and Maintenance of such Patents including by providing copies of all substantive office actions, examination reports, communications or any other substantive documents to or from any patent

office, including notice of all interferences, reissues, re-examinations, inter partes reviews, derivations, post grant proceedings, oppositions or requests for patent term extensions. [***] shall also provide [***] with a reasonable opportunity to comment substantively on the Prosecution and Maintenance of such Prothena Licensed Collaboration Patents (other than Prothena Platform Patents) and Licensed Program Patents prior to taking material actions (including the filing of initial applications), and will in good faith consider any comments made by and actions recommended by [***], provided, however, that [***] does so consistent with any applicable filing deadlines.

(b) [***] Back-Up Right. If [***] in any country decides not to file a Prothena Licensed Collaboration Patent (other than Prothena Platform Patents) or Licensed Program Patent or intends to allow such Patent to lapse or become abandoned without having first filed a substitute, it shall notify and consult with [***] of such decision or intention at least [***] days prior to the date upon which the subject matter of such Patent shall become unpatentable or such Patent shall lapse or become abandoned, and, if [***], [***] shall thereupon have the right (but not the obligation) to assume the Prosecution and Maintenance thereof at [***] expense with counsel of its choice. [***].

6.8.3 Cooperation in Prosecution and Maintenance.

(a) Further Assurances. If Celgene determines to undertake the Prosecution and Maintenance of a Prothena Licensed Collaboration Patent or Licensed Program Patent (other than a Prothena Platform Patent) in accordance with this Section 6.8, Prothena agrees to make its employees, agents and consultants reasonably available to Celgene (and to Celgene's authorized attorneys, agents or representatives) to enable Celgene to undertake such Prosecution and Maintenance. In addition, Prothena shall (and shall cause its Affiliates and its and their employees, agents and consultants to) provide reasonable assistance to Celgene (and to Celgene's authorized attorneys, agents or representatives) to enable Celgene to undertake such Prosecution and Maintenance, including by executing powers of attorney and other documents for Celgene to undertake such Prosecution and Maintenance.

(b) Assistance. The Parties shall reasonably cooperate with one another with respect to the Prosecution and Maintenance of the Prothena Licensed Collaboration Patents and Licensed Program Patents for which either Party is responsible for Prosecution and Maintenance pursuant to this Section 6.8. [***], the Parties shall cooperate with one another to [***], in each case that are applicable to the Licensed Target or Licensed Program Antibody, as applicable, if practicable to [***].

6.8.4 Costs of Prosecution and Maintenance. Except as otherwise expressly set forth in this Section 6.8.4, each Party shall be responsible for all costs and expenses associated with its Prosecution and Maintenance activities under this Section 6.8 with respect to Prothena Licensed Collaboration Patents and Licensed Program Patents for which it is responsible pursuant to Sections 6.8.1 or 6.8.2, as applicable. Notwithstanding the foregoing provisions of this Section 6.8.4, [***]. If any Prothena Licensed Collaboration Patents or Licensed Program Patents claim or cover [***], and such Prothena Licensed Collaboration Patent or Licensed Program Patent, as applicable, is [***], then Prothena shall [***], and [***].

6.9 Enforcement of Prothena Licensed Collaboration Patents and Licensed Program Patents

6.9.1 Notice. If any Party learns of an infringement or threatened infringement by a Third Party of any Prothena Licensed Collaboration Patent or Licensed Program Patent, in

each case other than a Prothena Platform Patent, in the Territory (including in connection with any Biosimilar Application referencing a Licensed Product (regardless of whether such notice or copy is provided under any Applicable Laws) including under the BPCIA or the United States Patient Protection and Affordable Care Act or its successor provisions, or any similar provisions in a country outside the United States, as applicable) such Party shall promptly notify the other Party and shall provide such other Party with available evidence of such infringement, and following such notification, the Parties shall confer.

6.9.2 [***]First Right. Subject to the remaining provisions of this Section 6.9.2, [***] shall have the first right, but not the obligation, to institute, prosecute, and control any action or proceeding (which may include settlement or otherwise seeking to secure the abatement of such infringement) with respect to any infringement of any (i) Prothena Licensed Collaboration Patent or (ii) Licensed Program Patent, in each case other than a Prothena Platform Patent, (including in connection with any Biosimilar Application referencing a Licensed Product (regardless of whether such notice or copy is provided under any Applicable Laws), including under the BPCIA or the United States Patient Protection and Affordable Care Act or its successor provisions, or any similar provisions in a country outside the United States, as applicable), by counsel of its own choice, in [***] own name ([***]) and under [***] direction and control, including the right to control the defense of any challenges to such Patents as a counterclaim in such infringement proceeding as well as the defense of declaratory judgment actions. Prothena retains all rights to enforce the Prothena Platform Patents against any actual or threatened infringement.

6.9.3 [***] Back-Up Right. If [***] determines not to institute an action or proceeding with respect to a given infringement of any Prothena Licensed Collaboration Patent or Licensed Program Patent pursuant to Section 6.9.2, it shall notify and consult with [***] of such decision, and, subject to the remaining provisions of this Section 6.9.3, [***] shall thereupon have the right (but not the obligation) to institute an action or proceeding with respect to such infringement of such Prothena Licensed Collaboration Patent or Licensed Program Patent, as applicable, at [***] expense with counsel of its choice. Notwithstanding the foregoing provisions of this Section 6.9.3, if [***] has any reasonable grounds for believing that [***] exercise of its backup enforcement right with respect to any Patent as set forth in this Section 6.9.3 [***], then [***] shall not be permitted to enforce such Patent without the prior consent of [***], in [***] discretion.

6.9.4 [***]. Notwithstanding the foregoing Sections 6.9.2 and 6.9.3, the Parties must agree in writing prior to either Party initiating any action or proceeding with respect to any infringement of any Prothena Licensed Collaboration Patent or Licensed Program Patent with respect to [***].

6.9.5 Joinder. In the case of any enforcement action or proceeding set forth in Section [***] controlled by Celgene, Prothena will (and will cause its Affiliates to) join any such action or proceeding as a party at Celgene's expense (and Prothena will use commercially reasonable efforts to cause any Third Party as necessary to join such action or proceeding as a party) if doing so is necessary for the purposes of establishing standing or is otherwise required by Applicable Law to pursue such action or proceeding. Prothena may, at its option, participate in such enforcement action or proceeding at its own expense. In the case of any enforcement action or proceeding controlled by Prothena pursuant to Section [***], Celgene may, at its option, participate in such enforcement action or proceeding at its own expense. Celgene will join any such action or proceeding controlled by Prothena as a party at Prothena’s expense (and Celgene will use commercially reasonable efforts to cause any Third Party as necessary to join such action or proceeding as a party) if doing so is necessary for the purposes of establishing

standing or is otherwise required by Applicable Law to pursue such action or proceeding. Celgene will bear all costs and expenses incurred by it arising out of such enforcement action or proceeding controlled by Celgene, and Prothena will bear all costs and expenses incurred by it arising out of such enforcement action or proceeding controlled by Prothena.

6.9.6 Consultation; Cooperation. The enforcing Party will keep the non-enforcing Party regularly informed of the status and progress of such enforcement efforts with respect to any Prothena Licensed Collaboration Patent or Licensed Program Patent, in each case other than a Prothena Platform Patent. The enforcing Party shall consult with the non-enforcing Party and will take comments of the non-enforcing Party into good faith consideration with respect to the infringement or claim construction of any claim in any such Prothena Licensed Collaboration Patent or Licensed Program Patent. The non-enforcing Party will provide to the enforcing Party reasonable cooperation in such enforcement, at such enforcing Party's request and expense.

6.9.7 Settlement. A settlement or consent judgment or other voluntary final disposition of a suit with respect to the Prothena Licensed Collaboration Patents or Licensed Program Patents, in each case other than a Prothena Platform Patent, under this Section 6.9 may be entered into without the consent of the Party not bringing suit; provided, however, that any such settlement, consent judgment or other disposition of any action or proceeding by the Party bringing suit under this Section 6.9 shall not, without the prior written consent of the Party not bringing suit, such consent not to be unreasonably withheld, (i) impose [***] liability or obligation on the Party not bringing suit or any of its Affiliates, (ii) conflict with [***] the subject matter claimed in the applicable Prothena Licensed Collaboration Patents or Licensed Program Patents, (iii) [***], include the grant of any license, covenant or other rights to any Third Party that would conflict with [***] the rights or licenses granted to Celgene under this Agreement, the Master Collaboration Agreement, any other Global License Agreement or any U.S. License Agreement, or (iv) [***].

6.9.8 Costs and Recoveries. Except as otherwise set forth in this Section 6.9.8, each Party shall bear all of its costs incurred in connection with its activities under this Section 6.9.8. Any damages or other monetary awards recovered in any action, suit or proceeding brought under this Section 6.9.8 to the extent related to any Prothena Licensed Collaboration Patents or Licensed Program Patents shall be shared as follows:

(a) the amount of such recovery actually received by the Party controlling such action shall first be applied to reimburse costs and expenses incurred by each Party in connection with such action (including, for this purpose, [***]); and

(b) any remaining proceeds shall be (i) for any action controlled by Celgene, retained by, or provided to, Celgene [***], and (ii) for any action controlled by Prothena, retained by, or provided to, Prothena [***].

6.9.9 Biosimilar Applications. Notwithstanding the foregoing provisions of this Section 6.9, if either Party receives a copy of a Biosimilar Application referencing a Licensed Product, whether or not such notice or copy is provided under any Applicable Laws (including under the BPCIA, the United States Patient Protection and Affordable Care Act, or its successor provisions, or any similar provisions in a country outside the United States, as applicable), or otherwise becomes aware that such a Biosimilar Application has been submitted to a Regulatory Authority for marketing authorization (such as in an instance described in 42 U.S.C. §262(l)(2)), the remainder of this Section 6.9.9 shall apply. Such Party shall promptly, but in any event within [***] Business Days, notify the other Party. The owner of the relevant Patents shall then

seek permission to view the Biosimilar Application, information regarding the process or processes used to manufacture the product that is the subject of the Biosimilar Application, and related confidential information from the filer of the Biosimilar Application if necessary under 42 U.S.C. §262(l)(1)(B)(iii). If either Party receives any equivalent or similar communication or notice in the United States or any other jurisdiction, the Party receiving such communication or notice shall within [***] Business Days notify the other Party of such communication or notice to the extent permitted by Applicable Laws. Regardless of the Party that is the "reference product sponsor," as defined in 42 U.S.C. §262(l)(1)(A), for purposes of such Biosimilar Application:

(a) [***] the outside counsel and in-house counsel who shall receive confidential access to the Biosimilar Application, information regarding the process or processes used to manufacture the product that is the subject of the Biosimilar Application, and any related confidential information pursuant to 42 U.S.C. §262(l)(1)(B)(ii).

(b) In each case, after consulting with [***] and considering [***] comments in good faith, [***] shall have the right to (a) list any patents, including those Patents within the Prothena IP, as required pursuant to 42 U.S.C. §262(l)(3)(A) or 42 U.S.C. §262(l)(7), (b) respond to any communications with respect to such lists from the filer of the Biosimilar Application, (c) negotiate with the filer of the Biosimilar Application as to whether to utilize a different mechanism for information exchange other than that specified in 42 U.S.C. §262(l)(1), and (d) as to the Patents that will be subject to the litigation procedure as described in 42 U.S.C. §262(l)(4), decide which Patent or Patents shall be selected for litigation under 42 U.S.C. §262(l)(5)(B)(i)(II), and commence such litigation under 42 U.S.C. §262(l)(6). [***].

(c) [***].

(d) [***] shall cooperate with [***] reasonable requests in connection with the foregoing activities to the extent required or permitted by Applicable Laws. [***] shall consult with [***] prior to identifying any Patents within the Prothena IP to a Third Party as contemplated by this Section 6.9.9. [***] shall consider in good faith advice and suggestions with respect thereto received from [***], and notify [***] of any such lists or communications promptly after they are made.

(e) Each Party shall within [***] Business Days after receiving any notice of commercial marketing provided by the filer of a Biosimilar Application pursuant to 42 U.S.C. §262(l)(8)(A), notify the other Party. To the extent permitted by Applicable Law, [***] shall have the first right, but not the obligation, to seek an injunction against such commercial marketing as permitted pursuant to 42 U.S.C. §262(l)(8)(B) and to file an action for infringement. [***]. Except as otherwise provided in this Section 6.9.9, any such action shall be subject to the terms and conditions of Section 6.9.1 through 6.9.8.

(f) The Parties recognize that procedures other than those set forth above in this Section 6.9.9 may apply with respect to Biosimilar Applications. In the event that the Parties determine that certain provisions of Applicable Laws in the United States or in any other country in the Territory apply to actions taken by the Parties with respect to Biosimilar Applications under this Section 6.9.8 in such country, the Parties shall comply with any such Applicable Laws in such country (and any relevant and reasonable procedures established by Parties) in exercising their rights and obligations with respect to Biosimilar Applications under this Section 6.9.9. Notwithstanding the

provisions of this Section 6.9.9, nothing in this Section 6.9.9 shall grant any rights to Prothena with respect to any Celgene IP.

6.10 Patent Term Extensions. Prothena shall reasonably cooperate with Celgene, including providing reasonable assistance to Celgene (including executing any documents as may reasonably be required), in efforts to seek and obtain patent term restoration or supplemental protection certificates or the like or their equivalents in any country in the Territory, where applicable to Prothena Licensed Collaboration Patents or Licensed Program Patents or any other Patents Controlled by Celgene (or any of its Affiliates), in each case other than a Prothena Platform Patent, including as may be available to the Parties under the provisions of the U.S. Drug Price Competition and Patent Term Restoration Act of 1984 or comparable laws outside the United States of America, in each case, in connection with any Licensed Product. In the event that elections with respect to obtaining such patent term restoration or supplemental protection certificates or the like or their equivalents are to be made in connection therewith, [***] shall have the right to make the election [***]. Without limiting the foregoing, [***].

6.11 Regulatory Data Protection. [***] (or its designee) shall have the sole right to list, with the applicable Regulatory Authorities in the Territory, all applicable Patents (including any Prothena Licensed Collaboration Patents or Licensed Program Patents) for any Licensed Product, including all so called “Purple Book” listings required under the U.S. Public Health Service Act, and all similar listings in any other relevant countries, [***]. For the avoidance of doubt, [***] will retain final decision-making authority as to the listing of all applicable Patents for any Licensed Product, regardless of which Party owns such Patent, and [***] shall reasonably assist [***] in connection therewith.

6.12 Matters Involving Joint Patents. The Prosecution and Maintenance, and the enforcement and defense, of any Joint Patents shall be jointly managed by the Parties through independent patent counsel (mutually agreed to by the Parties) jointly representing the Parties, including any costs and recoveries regarding same. Prior to either Party publishing any Joint Know-How, the Parties will discuss if a Joint Patent claiming such Joint Know-How should be filed.

6.13 Common Interest Agreement

. At the request of either Party, the Parties shall negotiate in good faith to enter into a common interest agreement to govern their discussion of Patent matters.

6.14 License Filing. At the request of [***], [***] shall, and shall cause its Affiliates to, assist in any license registration processes with applicable Governmental Authorities that may be available for the protection of [***] interests in this Agreement.

6.15 Defense of Claims Brought by Third Parties. If a Party becomes aware of any actual or potential claim that the Development, Manufacture or Commercialization of a Licensed Antibody or Licensed Product by or on behalf of Celgene pursuant to this Agreement infringes the intellectual property rights of any Third Party, such Party shall promptly notify the other Party. In any such instance, the Parties shall as soon as practicable thereafter meet to discuss in good faith regarding the best response to such notice; provided that Celgene shall have the final decision-making authority in connection therewith. Except as set forth in Section 9.2 (and without limiting Celgene’s rights under Section 9.2), Celgene shall have the sole right, but not the obligation, to defend and dispose of (including through settlement or license) such claim. [***].

ARTICLE 7
CONFIDENTIALITY

7.1 Nondisclosure. Each Party agrees that a Party (the "Receiving Party") receiving Confidential Information of the other Party (the "Disclosing Party") pursuant to this Agreement shall (a) maintain in confidence such Confidential Information using not less than the efforts such Receiving Party uses to maintain in confidence its own proprietary information of similar kind and value, but in no event less than a reasonable degree of efforts, (b) not disclose such Confidential Information to any Third Party without the prior written consent of the Disclosing Party, except for disclosures expressly permitted pursuant to this Article 7, and (c) not use such Confidential Information for any purpose except those permitted by this Agreement, including, in the case of Celgene, the exercise of the rights and licenses granted to Celgene hereunder (it being understood that this clause (c) shall not create or imply any rights or licenses not expressly granted under this Agreement). The obligations of confidentiality, non-disclosure and non-use under this Section 7.1 shall be in full force and effect during the Term and for a period of [***] years thereafter. The Receiving Party will return all copies of or destroy (and certify such destruction in writing) the Confidential Information of the Disclosing Party disclosed or transferred to it by the other Party pursuant to this Agreement, within [***] days after the termination or expiration of this Agreement; provided, however, that a Party may retain (i) Confidential Information of the other Party to exercise rights and licenses which expressly survive such termination or expiration pursuant to this Agreement, and (ii) one (1) copy of all other Confidential Information in archives solely for the purpose of establishing the contents thereof. [***]. Without limiting the foregoing, [***] will keep confidential, and will cause its Affiliates and its and their employees, consultants, licensees, sublicensees, professional advisors and Affiliates to keep confidential, [***] on confidentiality terms at least as protective as the confidentiality provisions of this Agreement (without regard to Section 7.3).

7.2 Licensed Program Specific Confidential Information. Notwithstanding anything to the contrary contained herein, the Parties agree and acknowledge that any Licensed Program Specific IP shall be deemed to be Confidential Information of Celgene (without regard to Section 7.3), and Celgene shall be deemed to be the Disclosing Party with respect to the Licensed Program Specific IP. As used herein, (a) the term "**Licensed Program Specific IP**" means [***]; and (b) the term "**Licensed Program Non-Specific IP**" means all Prothena Platform Technology within the Prothena Licensed Collaboration Know-How, and other Prothena Licensed Collaboration Know-How and Licensed Program Know-How other than Licensed Program Specific IP. For clarity, Licensed Program Non-Specific IP shall be deemed to be the Confidential Information of Prothena.

7.3 Exceptions.

7.3.1 General. The obligations in Section 7.1 shall not apply with respect to any portion of the Confidential Information of the Disclosing Party that the Receiving Party can show by competent written proof:

(a) was known to the Receiving Party or any of its Affiliates, without any obligation to keep it confidential or any restriction on its use, prior to disclosure by the Disclosing Party;

(b) is subsequently disclosed to the Receiving Party or any of its Affiliates by a Third Party lawfully in possession thereof and without any obligation to keep it confidential or any restriction on its use;

(c) is published by a Third Party or otherwise becomes publicly available or enters the public domain, either before or after it is disclosed to the Receiving Party, without any breach by the Receiving Party of its obligations hereunder;

(d) is published by a Party in accordance with Section 7.8 without any breach by such Party of its obligations hereunder; or

(e) is independently developed by or for the Receiving Party or its Affiliates without reference to or reliance upon the Disclosing Party's Confidential Information.

Any combination of features or disclosures shall not be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the Receiving Party unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the Receiving Party.

7.4 Authorized Disclosure.

7.4.1 Disclosure. Notwithstanding Section 7.1, the Receiving Party may disclose Confidential Information belonging to the Disclosing Party in the following instances:

(a) subject to Section 7.6, to comply with Applicable Law (including the rules and regulations of the U.S. Securities and Exchange Commission ("**SEC**") or any national securities exchange) or with judicial process (including prosecution or defense of litigation), if, in the reasonable opinion of the Receiving Party's counsel, such disclosure is necessary for such compliance or for such judicial process (including prosecution or defense of litigation);

(b) is disclosed to governmental or other regulatory agencies in order to obtain Patents or to gain or maintain approval to conduct Clinical Trials or to market Licensed Product under this Agreement, in each case, in accordance with this Agreement, but such disclosure shall only be to the extent reasonably necessary to obtain Patents or authorizations, and provided that reasonable steps are taken to ensure confidential treatment of such Confidential Information (if available);

(c) to any of its officers, employees, consultants, agents or Affiliates (including, (i) [***], (ii) in the case of either Party, to such Party's subcontractors for purpose of such subcontractor performing obligations of such Party under this Agreement) as it deems necessary or advisable in the course of conducting activities in accordance with this Agreement in order to carry out its responsibilities or exercise its rights under this Agreement (including the exercise of the rights and licenses granted to the relevant Party hereunder), and (iii) in the case of either Party, to such Party's actual or potential acquirers; provided that each such disclosee is bound by written confidentiality obligations and non-use obligations no less restrictive than those set forth in this Article 7 to maintain the confidentiality thereof and not to use such Confidential Information except as expressly permitted by this Agreement; provided, however, that, in each of the above situations in this Section 7.4.1(c), the Receiving Party shall remain responsible for any failure by any Person who receives Confidential Information from such Receiving Party pursuant to this Section 7.4.1(c) to treat such Confidential Information as required under this Article 7; and

(d) disclosure, solely on a "need to know basis" to its advisors (including attorneys and accountants) in connection with activities hereunder; provided that,

prior to any such disclosure, each disclosee must be bound by written obligations of confidentiality, non-disclosure and non-use no less restrictive than the obligations set forth in this Article 7 (provided, however, that in the case of legal advisors, no written agreement shall be required), which for the avoidance of doubt, will not permit use of such Confidential Information for any purpose except those expressly permitted by this Agreement; provided, however, that, in each of the above situations in this Section 7.4.1(d), the Receiving Party shall remain responsible for any failure by any Person who receives Confidential Information from such Receiving Party pursuant to this Section 7.4.1(d) to treat such Confidential Information as required under this Article 7.

7.4.2 Terms of Disclosure. If and whenever any Confidential Information is disclosed in accordance with this Section 7.4, such disclosure shall not cause any such information to cease to be Confidential Information except to the extent that such disclosure results in a public disclosure of such information (other than by breach of this Agreement). Where reasonably possible and subject to Section 7.6, the Receiving Party shall notify the Disclosing Party of the Receiving Party's intent to make any disclosures pursuant to Section 7.4.1(a) sufficiently prior to making such disclosure so as to allow the Disclosing Party adequate time to take whatever action it may deem appropriate to protect the confidentiality of the information, and the Receiving Party will provide reasonable assistance to the Disclosing Party with respect thereto; provided that, in such event, the Receiving Party will use reasonable measures to ensure confidential treatment of such information and shall only disclose such Confidential Information of the Disclosing Party as is necessary for the purposes of Section 7.4.1(a), as applicable.

7.4.3 Licensed Program Specific IP. [***] shall not disclose the Licensed Program Specific IP without the prior written consent [***], other than pursuant to Section 7.4.1.

7.5 Terms of this Agreement. The Parties agree that this Agreement and the terms hereof shall be deemed to be Confidential Information of both Prothena and Celgene, and each Party agrees not to disclose any of them without the prior written consent of the other Party, except that each Party may disclose any of them in accordance with the provisions of Sections 7.4 and/or 7.6, as applicable.

7.6 Securities Filings; Disclosure under Applicable Law. Each Party acknowledges and agrees that the other Party may submit this Agreement to (or file this Agreement with) the SEC or any national securities exchange in any jurisdiction (collectively, the "**Securities Regulators**"), or to other Persons as may be required by Applicable Law, and if a Party does submit this Agreement to (or file this Agreement with) any Securities Regulators, or other Persons as may be required by Applicable Law, such Party agrees to consult with the other Party with respect to the preparation and submission of a confidential treatment request for this Agreement. Notwithstanding the foregoing, if a Party is required by Applicable Law or any Securities Regulator to make a disclosure of the terms of this Agreement in a filing or other submission as required by Applicable Law or Securities Regulator, and (a) such Party has provided copies of the disclosure to the other Party reasonably in advance of such filing or other disclosure under the circumstances, (b) such Party has promptly notified the other Party in writing of such requirement and any respective timing constraints, and (c) such Party has given the other Party a reasonable time under the circumstances from the date of notice by such Party of the required disclosure to comment upon and request confidential treatment for such disclosure, then such Party will have the right to make such disclosure at the time and in the manner reasonably determined by its counsel to be required by Applicable Law or Securities Regulator. Notwithstanding the foregoing, it is hereby understood and agreed that if a Party seeks to make a disclosure as required by Applicable Law or Securities Regulator as set forth in

this Section 7.6, and the other Party provides comments within the respective time periods or constraints specified herein or within the respective notice, the Party seeking to make such disclosure or its counsel, as the case may be, will in good faith consider incorporating such comments.

7.7 Publicity.

7.7.1 Press Release; Public Statements. Subject to Section 7.4, 7.6 and this Section 7.7, Prothena agrees not to (and shall cause its Affiliates not to) issue any press release or other public statement disclosing this Agreement, the activities hereunder, or the transactions contemplated hereby, unless such press release or other public statement is approved by Celgene in writing; provided that Prothena shall be authorized to make any disclosure, without the approval of Celgene, that is required by Applicable Laws (including the U.S. Securities Act of 1933, as amended, and the U.S. Securities Exchange Act of 1934, as amended) or the rules of any Securities Regulator, or by judicial process, subject to and in accordance with Sections 7.4 and 7.6, as applicable. Without limiting the foregoing, and subject to the foregoing proviso, in the event that Prothena desires to issue an initial press release regarding the execution of this Agreement, Prothena shall have the right to do so [***]. For the avoidance of doubt, [***].

7.7.2 Additional Restrictions on Disclosure. Without limiting any other restrictions on disclosure set forth in this Article 7 with respect to any press release or other public statement proposed to be made by Prothena, if such press release or public statement discloses, with respect to such Licensed Program, [***], such press release or other public statement may not be issued without Celgene's prior written consent, except, for such disclosures by Prothena as required by Applicable Law or Securities Regulators (solely and to the extent Prothena's counsel determines such disclosure is required by Applicable Law or Securities Regulators); provided that (i) in such case Prothena shall use reasonable efforts to afford Celgene a reasonable period of time to review any such disclosure and any comments made by Celgene will be considered in good faith and (ii) any information that has been previously publicly disclosed in accordance with this Agreement may be disclosed again as long as such disclosure does not exceed the scope of such prior public disclosure. Subject to the foregoing, in the event Celgene proposes that Prothena use specific wording or language with respect thereto, Prothena shall in good faith consider incorporating such wording or language.

7.7.3 Previously Issued Public Statements. The contents of any press release or other public statement that has been reviewed and approved by a reviewing Party may be re-released by the publishing Party or by such reviewing Party without a requirement for re-approval.

7.8 Permitted Publications of Results.

7.8.1 Publication. In the event Prothena (the "**Publishing Party**") desires to publish or present any information (including publications in journals, posters, presentations at conferences and abstracts submitted in advance of conferences) with respect to the results of the Licensed Program (including the results of a Phase 1 Clinical Trial under the Licensed Program), or with respect to the Licensed Target, any Licensed Antibody or Licensed Product, the Publishing Party shall provide Celgene with a copy of such proposed publication or presentation no less than [***] days (provided that the other Party shall use Commercially Reasonable Efforts to accommodate a shorter time period if required due to circumstances outside of the Publishing Party's control) prior to its intended submission for publication or public disclosure. For the avoidance of doubt, the foregoing shall apply with respect to each proposed publication or presentation regardless of whether a prior publication or presentation was provided (e.g., if an

abstract is provided in accordance with this Section 7.8.1 and the Publishing Party wishes to publish the corresponding full manuscript, the full manuscript must be provided to Celgene pursuant to this Section 7.8.1). Celgene shall respond in writing promptly and in no event later than [***] days after receipt of the proposed material (provided that the other Party shall use Commercially Reasonable Efforts to accommodate a shorter time period if notified by the Publishing Party and required due to circumstances outside of the Publishing Party's control), with one or more of the following:

(a) comments on the proposed material, which the Publishing Party shall consider in good faith; and/or

(b) a specific statement of concern, based upon the need to seek patent protection or to block publication or public disclosure (including publications in journals, posters, presentations at conferences and abstracts submitted in advance of conferences) if Celgene reasonably determines that the proposed disclosure is intellectual property that should be maintained as a trade secret to protect the Licensed Target or any Licensed Antibody and/or Licensed Product, in which event the Publishing Party agrees not to submit such publication or make such presentation that contains such information until:

(i) with respect to publication or presentation of Licensed Program Non-Specific IP, Celgene is given [***] to seek patent protection for any such Licensed Program Non-Specific IP in such publication or presentation which it believes is patentable or to resolve any other issues, or

(ii) with respect to publication or presentation of Licensed Program Specific IP, [***] for Celgene to (x) enable further development and optimization of such Licensed Program Specific IP (including related Licensed Antibodies and Licensed Products), (y) seek patent protection for any such Licensed Program Specific IP in such publication or presentation which it believes is patentable or (z) resolve any other issues; and/or

(c) an identification of Celgene's Confidential Information that is contained in the material reviewed, which the Publishing Party shall remove, if requested by Celgene.

Notwithstanding the foregoing or anything to the contrary contained herein, the restrictions set forth in this Section 7.8.1 shall not apply to publications or presentations by Celgene (or its Affiliates or sublicensees) and Celgene (and its Affiliates and sublicensees) shall be free to make publications and presentations with respect to results of the Licensed Program, the Licensed Target, Licensed Antibody and/or Licensed Product without the prior review or consent of Prothena.

7.8.2 Re-Publication; Re-Presentation. The contents of any publication or presentation that has been reviewed and approved by a reviewing Party may be re-released by the Publishing Party or the reviewing Party without a requirement for re-approval.

7.9 Use of Names. Except as otherwise expressly set forth herein, no Party (or its respective Affiliates) shall use the name, trademark, trade name or logo of the other Party or its Affiliates, or its or their respective employee(s) in any publicity, promotion, news release or other public disclosure relating to this Agreement or its subject matter, without the prior written permission of the other Party; provided that such permission shall not be required to the extent use thereof may be required by Applicable Law, including the rules of any securities exchange or market on which a Party's (or its Affiliate's) securities are listed or traded.

7.10 Clinical Trials Registry. Celgene (and its Affiliates and designees) shall have the right to publish registry information and summaries of data and results from any Clinical Trials conducted in connection with activities under this Agreement, on its clinical trials registry or on a government-sponsored database such as www.clinicaltrials.gov, without requiring the consent of Prothena. The Parties shall reasonably cooperate if required or reasonably requested by Celgene in order to facilitate any such publication by Celgene (and its Affiliates and designees).

7.11 Relationship to Master Collaboration Agreement and Licensed Program U.S. License Agreement Except as otherwise expressly stated in this Article 7, this Agreement supersedes the provisions of Article 8 of the Master Collaboration Agreement and the provisions of Article 7 of the Licensed Program U.S. License Agreement with respect to any Confidential Information related to the Licensed Program, the Licensed Target, Licensed Antibodies or Licensed Products (the "**Licensed Program Confidential Information**"); provided that, except as otherwise set forth herein, all "Confidential Information" of the "Disclosing Party" thereunder that is Licensed Program Confidential Information shall be deemed Confidential Information of the Disclosing Party hereunder and shall be subject to the terms and conditions of this Agreement and the "Receiving Party" shall be bound by and obligated to comply with such terms and conditions as if they were the Receiving Party hereunder, subject in all cases to Section 7.2. The foregoing shall not be interpreted as a waiver of any remedies available to the "Disclosing Party" as a result of any breach, prior to the Effective Date, by the "Receiving Party", of its obligations pursuant to Article 8 of the Master Collaboration Agreement or pursuant to Article 7 of the Licensed Program U.S. License Agreement, as applicable.

ARTICLE 8
REPRESENTATIONS AND WARRANTIES; COVENANTS

8.1 Representations and Warranties of Both Parties. Each Party hereby represents and warrants to the other Party, as of the Effective Date, that:

(a) such Party is duly organized, validly existing and in good standing under the Applicable Law of the jurisdiction of its formation and has full corporate power and authority to enter into this Agreement, and to carry out the provisions hereof;

(b) such Party has taken all necessary corporate action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

(c) this Agreement has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, binding obligation, enforceable against it in accordance with its terms, except to the extent that enforcement of the rights and remedies created hereby is subject to (i) bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors, or (ii) laws governing specific performance, injunctive relief and other equitable remedies;

(d) the execution, delivery and performance of this Agreement by such Party does not breach or conflict with any agreement or any provision thereof, or any instrument or understanding, oral or written, to which such Party (or any of its Affiliates) is a party or by which such Party (or any of its Affiliates) is bound, nor violate any Applicable Law of any Governmental Authority having jurisdiction over such Party (or any of its Affiliates);

(e) no government authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission,

board, bureau, agency or instrumentality, domestic or foreign, under any Applicable Law currently in effect, is or will be necessary for, or in connection with, the transaction contemplated by this Agreement, or for the performance by it of its obligations under this Agreement, except (i) as may be required to conduct Development or Commercialization activities, including conducting Clinical Trials, seeking, obtaining, or maintaining Regulatory Approvals or applicable Regulatory Materials, or Manufacturing or (ii) as set forth in Section 3.2 of the Master Collaboration Agreement; and

(f) it has obtained all necessary authorizations, consents and approvals of any Third Party that is required to be obtained by it as of the Effective Date for, or in connection with, the transaction contemplated by this Agreement, or for the performance by it of its obligations under this Agreement, except (i) as may be required to conduct Development or Commercialization activities, including conducting Clinical Trials, seeking, obtaining, or maintaining Regulatory Approvals or applicable Regulatory Materials, or Manufacturing or (ii) as set forth in Section 3.2 of the Master Collaboration Agreement.

8.2 Representations and Warranties of Prothena. Except as set forth on Schedule 8.2, Prothena hereby represents and warrants to Celgene, as of the Effective Date, that:

(a) Schedules 1.46(b) and 1.63 contain a complete and accurate list of all Patents included in the Prothena IP that claim or cover any Licensed Target, Licensed Antibodies or Licensed Products, including the composition or use of any of the foregoing, and Prothena Controls all such Patents. Except for the Prothena IP, (i) Prothena and its Affiliates do not own or control (by license or otherwise), as of the Effective Date, any Patent or Know-How that is necessary or useful to Develop, Manufacture or Commercialize the Licensed Target, Licensed Antibodies or Licensed Products and (ii) no other Know-How or Patents arose from, or were used in, the performance of the Licensed Program under the Master Collaboration Agreement. To Prothena's and its Affiliates' actual knowledge, all issued Patents within the Prothena IP are in full force and effect, and are not invalid or unenforceable, in whole or in part;

(b) no claim has been issued or served, or written threat of a claim or litigation made by any Person, against Prothena or its Affiliates that alleges that any Prothena IP is invalid or unenforceable;

(c) neither Prothena nor its Affiliates own or otherwise control (through license or otherwise) any Antibodies (or any products constituting, incorporating, comprising or containing any such Antibody) that Target the Licensed Target, other than the Licensed Program Antibodies (all of which are set forth on Schedule 1.44) and the Licensed Program Products;

(d) [***];

(e) neither Prothena nor its Affiliates are subject to any payment obligations to Third Parties as a result of the execution or performance of this Agreement, or the research, development, manufacture or commercialization of the Licensed Target or any Antibodies (or any products constituting, incorporating, comprising or containing any such Antibody) that Target the Licensed Target;

(f) Prothena has the full right and authority to grant all of the rights and licenses granted to Celgene (or purported to be granted to Celgene) hereunder; and neither Prothena nor its Affiliates have granted any right or license to any Third Party relating to any of the Prothena IP or any other Licensed Program Asset, Licensed Target or Antibody (or any

products constituting, incorporating, comprising or containing any such Antibody) that Targets the Licensed Target, that would conflict with [***] any of the rights or licenses granted to Celgene hereunder;

(g) Prothena is the sole and exclusive owner of the Prothena IP, except for the Prothena Licensed Collaboration IP that is licensed to Prothena (or its Affiliates) pursuant to the In-License Agreements set forth on Schedule 1.39. All Affiliates of Prothena have [***] licensed or assigned all of their right, title and interest in and to the Prothena IP to Prothena. Neither Prothena nor its Affiliates have granted any mortgage, pledge, claim, security interest, lien or other charge of any kind on the Prothena IP or other Licensed Program Asset, and the Prothena IP and the other Licensed Program Assets are free and clear of any mortgage, pledge, claim, security interest, lien or charge of any kind;

(h) neither Prothena nor its Affiliates have received any written notice of any claim that any Patent or Know-How (including any trade secret right) owned or controlled by a Third Party would be infringed or misappropriated by the Development, Manufacture, or Commercialization of the Licensed Target, any Licensed Antibody or any Licensed Product;

(i) to Prothena's and its Affiliates' actual knowledge, (i) the Development and Manufacture of the Licensed Target, any Licensed Antibody or Licensed Product, as conducted by or on behalf of Prothena or its Affiliates prior to the Effective Date, has not violated, infringed or misappropriated any intellectual property or proprietary right of any Third Party and (ii) [***];

(j) there are no claims, judgments, settlements, litigations, suits, actions, disputes, arbitration, judicial or legal administrative or other proceedings or governmental investigations pending or, to Prothena's or its Affiliates' knowledge, threatened against Prothena or its Affiliates which would reasonably be expected to adversely affect or restrict the ability of Prothena to consummate or perform the transactions contemplated under this Agreement, or which would affect the Prothena IP or other Licensed Program Assets, or Prothena's Control thereof, or the Licensed Target or any Licensed Antibody or Licensed Product;

(k) neither Prothena nor its Affiliates have issued a claim against a Third Party alleging that a Third Party is infringing or has infringed or misappropriated any Prothena IP, and, to Prothena's and its Affiliates' actual knowledge, no issued Patents within the Prothena IP are being infringed and no trade secrets within the Prothena IP are being misappropriated by any Third Party;

(l) neither Prothena nor its Affiliates have employed or otherwise used in any capacity, the services of any Person suspended, proposed for debarment or debarred under United States law, including under 21 U.S.C. § 335a, or any foreign equivalent thereof, with respect to the Licensed Target, the Licensed Antibodies or Licensed Products or otherwise in performing any portion of the Licensed Program. All Manufacture and Development (including non-clinical studies and Clinical Studies) related to the Licensed Target, Licensed Antibodies or Licensed Products conducted by or on behalf of Prothena or its Affiliates prior to the Effective Date (including the conduct of the Licensed Program under the Master Collaboration Agreement) has been conducted in accordance with all Applicable Laws (including, to the extent applicable, GCP, GLP and GMP);

(m) neither Prothena nor its Affiliates have entered into any agreement under which Prothena or its Affiliates (i) has obtained a license or sublicense of rights from a

Third Party to the Licensed Target, or to any Antibodies (or any products constituting, incorporating, comprising or containing any such Antibody) that Target the Licensed Target, or to any Prothena IP, except for the In-License Agreements set forth on Schedule 1.39, or (ii) has granted a license, sublicense, option or right to a Third Party that remains in effect as of the Effective Date to research, develop, manufacture or commercialize the Licensed Target or any Antibodies (or any products constituting, incorporating, comprising or containing any such Antibody) that Target the Licensed Target, except (1) with respect to licenses or rights granted pursuant to the agreements set forth on Schedule 1.39 that were entered into in the ordinary course of business [***]and (2) [***]. The agreements set forth on Schedule 1.39 do not conflict with [***] the rights or licenses granted to Celgene hereunder;

(n) other than the Existing Program Agreements, Prothena (or its Affiliates, as applicable) has not entered into any agreement relating to the Development, Manufacture, Commercialization or other exploitation of the Licensed Target, Licensed Antibodies or Licensed Products, or the Prothena IP*;*

(o) with respect to each Existing Program Agreement and In-License Agreement, (i) it is in full force and effect; (ii) Prothena (or its Affiliate, as applicable) is not in breach thereof; (iii) Prothena (or its Affiliate, as applicable) has not received any notice from the counterparty to such Existing Program Agreement or In-License Agreement, as applicable, of Prothena's (or its Affiliate's, as applicable) breach or notice of threatened breach by Prothena (or its Affiliate, as applicable) thereof and (iv) Prothena has provided Celgene with a [***] copy of each Existing Program Agreement and In-License Agreement;

(p) Prothena has disclosed to Celgene all material information and data, and all material correspondences to/from any Regulatory Authority, existing as at the Effective Date in the possession or control of Prothena or its Affiliates, in each case related to the Licensed Program, Licensed Target, Licensed Antibodies or Licensed Products;

(q) the Licensed Program Inventory to be provided to Celgene hereunder was (and at all times up until delivery of such Licensed Program Inventory hereunder shall remain) manufactured, packaged, labeled, tested, stored and handled in accordance with all Applicable Laws (including GMPs), and specifications therefor, and such Licensed Program Inventory is not adulterated or misbranded under Applicable Law and is not an article that could not, under the provisions of the Applicable Law, be introduced into interstate commerce. All such Licensed Program Inventory is free and clear of all encumbrances (including through lien, charge, security interest, mortgage, encumbrance or otherwise); and

(r) other than the Existing IND, Prothena has not obtained, or filed, any INDs, MAAs or Regulatory Approvals or any other form of regulatory application for approval of Clinical Trials, marketing or other purpose, for any Licensed Antibodies or Licensed Products and, to Prothena's and its Affiliates' actual knowledge, no other Person has obtained, or filed for, any such INDs, MAAs or Regulatory Approvals. The Existing IND is in full force and good standing, and neither Prothena nor its Affiliates have received any notice in writing, or otherwise has knowledge of any facts, which have, or reasonably could have, led Prothena to believe that the Existing IND is not currently in, or may not remain in, good standing with the FDA or other applicable Regulatory Authority.

8.3 Additional Representations, Warranties and Covenants of Prothena. Prothena hereby further represents, warrants and covenants to Celgene that:

8.3.1 With respect to the In-License Agreements, (a) Prothena (or its Affiliates, as applicable) shall not breach, or commit any acts or permit the occurrence of any omissions that would cause the breach or termination, of any In-License Agreement and (b) Prothena shall (or shall cause its Affiliates to, as applicable) satisfy all of its obligations under each In-License Agreement in all material respects and shall, or shall cause its Affiliates to, as applicable, maintain each In-License Agreement in full force and effect. Prothena shall, or shall cause its Affiliates to, as applicable, enforce its rights under each In-License Agreement to the extent necessary to preserve Celgene's rights under this Agreement. Prothena shall not, and shall cause its Affiliates not to, [***]. Prothena will provide Celgene with prompt written notice of any claim of a breach of which it is aware under any of the In-License Agreements or notice of termination of any In-License Agreement.

8.3.2 With respect to the Existing Program Agreements, (a) Prothena (or its Affiliates, as applicable) shall not breach, or commit any acts or permit the occurrence of any omissions that would cause the breach or termination, of any Existing Program Agreement and (b) Prothena shall (or shall cause its Affiliates to, as applicable) satisfy all of its obligations under each Existing Program Agreement in all material respects and shall, or shall cause its Affiliates to, as applicable, maintain each Existing Program Agreement in full force and effect, unless Prothena otherwise obtains Celgene's prior written consent (such consent not to be unreasonably withheld). Prothena shall, or shall cause its Affiliates to, as applicable, enforce its rights under each Existing Program Agreement to the extent necessary to preserve Celgene's rights under this Agreement. Prothena shall not, and shall cause its Affiliates not to, [***]. [***] Prothena shall not, and shall cause its Affiliates not to assign or otherwise transfer any Existing Program Agreement. Prothena will provide Celgene with prompt written notice of any claim of a breach of which it is aware under any of the Existing Program Agreements or notice of termination of any Existing Program Agreement.

8.3.3 In-License Agreements. [***] on case-by-case basis, Prothena shall (or shall cause its Affiliates to, as applicable) execute a written agreement, in a form reasonably acceptable to Celgene, with each Third Party that is a counterparty to the applicable In-License Agreement (each such counterparty, a "**Prothena Licensor**") within [***] days after the date of such request, pursuant to which (a) in the event of an early termination of such In-License Agreement, [***], (b) [***], and (c) [***].

8.3.4 Notwithstanding anything to the contrary contained herein, [***].

8.3.5 Prothena shall promptly notify Celgene in writing if any Patents in the Prothena IP that claim or cover any Licensed Target, Licensed Antibodies or Licensed Products, including the composition or use of any of the foregoing, becomes known to Prothena that are not listed on Schedule 1.46(b) or 1.63.

8.4 Representations and Warranties of Celgene. Except as set forth on Schedule 8.4, Celgene hereby represents and warrants to Prothena, as of the Effective Date, that:

8.4.1 there are no claims, judgments, settlements, litigations, suits, actions, disputes, arbitration, judicial or legal administrative or other proceedings or governmental investigations pending or, to Celgene's actual knowledge, threatened against Celgene which would reasonably be expected to adversely affect or restrict the ability of Celgene to consummate or perform the transactions contemplated under this Agreement.

8.5 Covenants.

8.5.1 Mutual Covenants. Each Party hereby covenants to the other Party that:

(a) such Party and its Affiliates shall perform its activities pursuant to this Agreement in compliance (and shall ensure compliance by any of its subcontractors) with all Applicable Laws, including, to the extent applicable, GCP, GLP and GMP; and

(b) such Party and its Affiliates shall not employ or otherwise use in any capacity the services of any Person suspended, proposed for debarment or debarred under United States law, including under 21 U.S.C § 335a, or any foreign equivalent thereof, with respect to the Licensed Target, the Licensed Antibodies or Licensed Products or in performing any activities, including Development Activities, under this Agreement. All Manufacture and Development (including non-clinical studies and Clinical Trials) related to the Licensed Target, Licensed Antibodies or Licensed Products conducted by or on behalf of each Party or its Affiliates under this Agreement after the Effective Date (including the conduct of Manufacturing for Clinical Trials) shall be conducted in accordance with all Applicable Laws (including, to the extent applicable, GCP, GLP, and GMP).

8.5.2 Prothena Covenants. Prothena hereby covenants to Celgene that:

(a) Neither Prothena nor its Affiliates shall grant any right or license to any Third Party relating to any of the intellectual property rights it owns or Controls (including the Prothena IP and other Licensed Program Assets), or otherwise with respect to any Licensed Antibody, Licensed Product or Diagnostic Product which conflict with [***] any of the rights or licenses granted to Celgene hereunder; and

(b) Except with respect to the performance of the Prothena Ongoing Program Activities in accordance with Section 2.1.3 (or as otherwise expressly agreed to by Celgene in writing, including as set forth in Section 2.1.3(c)), neither Prothena nor its Affiliates shall use (and neither shall grant any Third Party the right to use) any Licensed Antibodies, Licensed Products or Diagnostic Products for any purposes in the Territory.

8.6 Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED (AND EACH PARTY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES NOT EXPRESSLY PROVIDED IN THIS AGREEMENT), INCLUDING WITH RESPECT TO ANY PATENTS OR KNOW-HOW, OR MATERIALS, INCLUDING WARRANTIES OF VALIDITY OR ENFORCEABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE OR PURPOSE, PERFORMANCE, AND NONINFRINGEMENT OF ANY THIRD PARTY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS. WITHOUT LIMITING THE FOREGOING, NEITHER PARTY MAKES ANY REPRESENTATION, WARRANTY OR GUARANTEE THAT THE LICENSED PROGRAM WILL BE SUCCESSFUL, OR THAT ANY OTHER PARTICULAR RESULTS WILL BE ACHIEVED WITH RESPECT TO THE LICENSED PROGRAM, THE LICENSED TARGET, ANY LICENSED ANTIBODY OR ANY LICENSED PRODUCT HEREUNDER.

ARTICLE 9
INDEMNIFICATION; INSURANCE

9.1 Indemnification by Celgene. Celgene shall indemnify, defend and hold harmless Prothena and its Affiliates and its and their respective directors, officers, employees, agents, successors and assigns (collectively, the "**Prothena Indemnitees**"), from and against any and all Third Party Damages to the extent arising out of or relating to, directly or indirectly, any Third Party Claim based upon:

(a) the gross negligence or willful misconduct of Celgene or its Affiliates or its or their respective directors, officers, employees or agents, in connection with Celgene's performance of its obligations under this Agreement;

(b) any breach by Celgene of any of its representations, warranties, covenants, agreements or obligations under this Agreement; or

(c) any claim for personal injury or death arising out of the Development, Manufacture or Commercialization of the Licensed Antibodies and Licensed Products in the Territory by or on behalf of Celgene or its Affiliates or Sublicensees during the Term;

in each case (a)-(c), provided, however, that such indemnity shall not apply to the extent Prothena has an indemnification obligation pursuant to Section 9.2(a) or (b) for such Third Party Damages.

9.2 Indemnification by Prothena. Prothena shall indemnify, defend and hold harmless Celgene, its Affiliates and its and their respective directors, officers, employees, agents, successors and assigns (collectively, the "**Celgene Indemnitees**"), from and against any and all Third Party Damages to the extent arising out of or relating to, directly or indirectly, any Third Party Claim based upon:

(a) the gross negligence or willful misconduct of Prothena or its Affiliates or its or their respective directors, officers, employees or agents, in connection with Prothena's performance of its obligations under this Agreement;

(b) any breach by Prothena of any of its representations, warranties, covenants, agreements or obligations under this Agreement; or

(c) any claim for personal injury or death arising out of the Development, Manufacture or Commercialization of the Licensed Antibodies (including Reversion Antibodies) and Licensed Products (including products containing Reversion Antibodies) by or on behalf of Prothena or its Affiliates or sublicensees;

in each case (a)-(c), provided, however, that such indemnity shall not apply to the extent Celgene has an indemnification obligation pursuant to Section 9.1(a) or (b) for such Third Party Damages.

9.3 Procedure. If a Party is seeking indemnification under Section 9.1 or 9.2, as applicable (the "**Indemnitee**"), it shall inform the other Party (the "**Indemnitor**") of the claim giving rise to the obligation to indemnify pursuant to Section 9.1 or 9.2, as applicable, as soon as reasonably practicable after receiving notice of the claim (provided, however, any delay or failure to provide such notice shall not constitute a waiver or release of, or otherwise limit, the

Indemnitee's rights to indemnification under Section 9.1 or 9.2, as applicable, except to the extent that such delay or failure materially prejudices the Indemnitor's ability to defend against the relevant claims). The Indemnitor shall have the right to assume the defense of any such claim for which the Indemnitee is seeking indemnification pursuant to Section 9.1 or 9.2, as applicable. The Indemnitee shall cooperate with the Indemnitor and the Indemnitor's insurer as the Indemnitor may reasonably request, and at the Indemnitor's cost and expense. The Indemnitee shall have the right to participate, at its own expense and with counsel of its choice, in the defense of any claim or suit that has been assumed by the Indemnitor. The Indemnitor shall not settle any claim without the prior written consent of the Indemnitee, not to be unreasonably withheld; provided, however, that the Indemnitor shall not be required to obtain such consent if the settlement (i) involves only the payment of money and will not result in the Indemnitee (or other Prothena Indemnitees or Celgene Indemnitees, as applicable) becoming subject to injunctive or other similar type of relief, (ii) does not require an admission by the Indemnitee (or other Prothena Indemnitees or Celgene Indemnitees, as applicable) and (iii) does not adversely affect the rights or licenses granted to the Indemnitee (or its Affiliate) under this Agreement. The Indemnitee shall not settle or compromise any such claim without the prior written consent of the Indemnitor, which it may provide in its sole discretion. If the Parties cannot agree as to the application of Section 9.1 or 9.2, as applicable, to any claim, pending resolution of the dispute pursuant to Section 11.8 the Parties may conduct separate defenses of such claims, with each Party retaining the right to claim indemnification from the other Party in accordance with Section 9.1 or 9.2, as applicable, upon resolution of the underlying claim. In each case, the Indemnitee shall reasonably cooperate with the Indemnitor, and shall make available to the Indemnitor all pertinent information under the control of the Indemnitee, which information shall be subject to Article 7.

9.4 Insurance. During the Term and for a period of [***] years thereafter, each Party shall maintain, at its cost, a program of insurance and/or self-insurance against liability and other risks associated with its activities and obligations under this Agreement (including, with respect to its Clinical Trials), and its indemnification obligations hereunder, in such amounts, subject to such deductibles and on such terms as are customary for such Party for the activities to be conducted by it under this Agreement. It is understood that such insurance shall not be construed to create a limit on either Party's liability with respect to its indemnification obligations under this Article 9, or otherwise.

9.5 LIMITATION OF LIABILITY. NEITHER PROTHENA NOR CELGENE, NOR ANY OF THEIR RESPECTIVE AFFILIATES, WILL BE LIABLE TO THE OTHER PARTY OR ITS AFFILIATES UNDER OR IN CONNECTION WITH THIS AGREEMENT FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE OR EXEMPLARY DAMAGES (INCLUDING LOST PROFITS OR LOST REVENUES), WHETHER LIABILITY IS ASSERTED IN CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), INDEMNITY, CONTRIBUTION OR OTHERWISE, AND IRRESPECTIVE OF WHETHER THAT PARTY OR ANY REPRESENTATIVE OF THAT PARTY HAS BEEN ADVISED OF, OR OTHERWISE MIGHT HAVE ANTICIPATED THE POSSIBILITY OF, ANY SUCH LOSS OR DAMAGE. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS SECTION 9.5 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF ANY PARTY UNDER SECTIONS 9.1 OR 9.2 IN CONNECTION WITH ANY THIRD PARTY CLAIMS [***].

ARTICLE 10
TERM AND TERMINATION

10.1 Term; Expiration.

10.1.1 Term. Subject to Section 3.2 of the Master Collaboration Agreement, this Agreement shall become effective on the Effective Date and, unless earlier terminated in accordance with this Article 10, shall remain in effect until it expires as follows (the "**Term**"):

(a) on a Licensed Product-by-Licensed Product and country-by-country basis, this Agreement shall expire on the date of the expiration of the Royalty Term with respect to such Licensed Product in such country; and

(b) in its entirety upon the expiration of all applicable Royalty Terms under this Agreement with respect to all Licensed Products in all countries in the Territory.

10.1.2 Effect of Expiration. After the expiration of the Term pursuant to Section 10.1.1 above, the following terms shall apply:

(a) Licenses after Licensed Product Expiration. After expiration of the Term with respect to a given Licensed Product in a given country pursuant to Section 10.1.1(a), the licenses set forth in Section 6.1 with respect to such Licensed Product (and the Licensed Antibody contained therein) and related Diagnostic Products in such country will automatically become fully paid-up, perpetual, irrevocable and royalty-free.

(b) Licenses after Expiration of Agreement. After expiration of the Term with respect to this Agreement in its entirety pursuant to Section 10.1.1(b), all licenses set forth in Section 6.1 will automatically become fully paid-up, perpetual, irrevocable and royalty-free.

10.2 Termination for Breach.

10.2.1 Material Breach. This Agreement may be terminated by a Party for the material breach by the other Party of this Agreement provided that the breaching Party has not cured such breach within [***] days after the date of written notice to the breaching Party of such breach (or [***] days in the case of a breach as a result of non-payment of any amounts due under this Agreement) (the "**Cure Period**"), which notice shall describe such breach in reasonable detail and shall state the non-breaching Party's intention to terminate this Agreement. For clarity, but subject to Section 10.2.2, the Cure Period for any allegation made as to a material breach under this Agreement will run from the date that written notice was first provided to the breaching Party by the non-breaching Party. Any such termination of this Agreement under this Section 10.2.1 shall become effective at the end of the Cure Period, unless the breaching Party has cured such breach prior to the expiration of such Cure Period, or, if such breach is not susceptible to cure within the Cure Period, then such Cure Period shall be extended for an additional [***] days so long as the breaching Party continues to use commercially reasonable efforts to cure such material breach during such extension period. For the avoidance of doubt, termination of this Agreement pursuant to this Section 10.2.1 shall terminate the Master Collaboration Agreement solely with respect to the Licensed Program but shall not terminate the Master Collaboration Agreement with respect to any other Programs or any U.S. License Agreement or other Global License Agreement for any other Program.

10.2.2 Disagreement as to Material Breach. Notwithstanding Section 10.2.1, if the Parties in good faith disagree as to whether there has been a material breach of this Agreement pursuant to Section 10.2.1, then: (a) the Party that disputes that there has been a material breach may contest the allegation by referring such matter, within [***], for resolution to the Executive Officers, who shall meet promptly to discuss the matter and determine, within [***], whether or not a material breach has occurred pursuant to Section 10.2.1; provided that if the Executive Officers are unable to resolve such dispute within such [***] period after it is referred to them, the matter will be resolved as provided in Section 11.8; (b) the relevant Cure Period with respect thereto will be tolled from the date the breaching Party notifies the non-breaching Party of such dispute and through the resolution of such dispute in accordance with the applicable provisions of this Agreement; (c) subject to Section 10.10, during the pendency of such dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder; and (d) if it is ultimately determined that the breaching Party committed such material breach, then the breaching Party shall have the right to cure such material breach, after such determination, within the Cure Period (as may be extended in accordance with Section 10.2.1) which shall commence as of the date of such determination.

10.3 Voluntary Termination. Celgene may terminate this Agreement at will, in its sole discretion, in its entirety upon [***] days' prior written notice to Prothena at any time.

10.4 Termination for Bankruptcy. If either Party makes a general assignment for the benefit of, or an arrangement or composition generally with, its creditors, appoints or suffers appointment of an examiner or of a receiver or trustee over all or substantially all of its property, passes a resolution for its winding up or files a petition under any bankruptcy or insolvency act or law or has any such petition filed against it which is not dismissed, discharged, bonded or stayed within [***] days after the filing thereof (each, an "**Insolvency Event**"), the other Party may terminate this Agreement in its entirety, effective immediately upon written notice to such Party, provided that, in connection therewith, the provisions of Section 6.5 shall apply.

10.5 Termination for Patent Challenge. Prothena shall have the right to terminate this Agreement upon written notice if Celgene or any Affiliate of Celgene challenges the validity, scope or enforceability of or otherwise opposes any Patent included in the Prothena IP that is licensed to Celgene under this Agreement, in each case through a formal proceeding (other than as may be necessary or reasonably required to assert a cross-claim or a counter-claim or to respond to a court request or order or administrative law, request or order). If a Sublicensee of Celgene with respect to any Prothena IP challenges the validity, scope or enforceability of or otherwise opposes any Patent included in such Prothena IP under which such Sublicensee is sublicensed, in each case through a formal proceeding (other than as may be necessary or reasonably required to assert a cross-claim or a counter-claim or to respond to a court request or order or administrative law, request or order) then Celgene shall, upon written notice from Prothena, terminate such sublicense.

10.6 Effects of Expiration or Termination; Additional Remedies

10.6.1 Termination by Prothena Pursuant to Section 10.2, 10.4 or 10.5, or by Celgene Pursuant to Section 10.3 or Section 10.12. In the event this Agreement is terminated by Prothena pursuant to Section 10.2, 10.4 or 10.5, or by Celgene pursuant to Section 10.3, upon the effective date of such termination:

(a) the Master Collaboration Agreement (if not previously expired or terminated) shall also terminate automatically with respect to the Licensed Program (but not any other Program);

(b) except as set forth in this Section 10.6.1, or Sections 10.8 or 10.9, all rights and licenses granted herein shall terminate;

(c) any and all Collaboration Specific IP (as defined in the Master Collaboration Agreement), shall thereafter no longer be deemed to be Collaboration Specific IP;

(d) each Party shall return or destroy all Confidential Information of the other Party as required by Article 7; and

(e) notwithstanding the foregoing provisions of this Section 10.6.1, the licenses granted to Celgene hereunder shall survive for [***] following the effective date of termination in order for Celgene (and its Affiliates, Sublicensees and distributors), at Celgene's discretion, during the [***] period immediately following the effective date of termination, to (i) finish or otherwise wind-down any ongoing Clinical Trials with respect to any Licensed Antibodies, Licensed Products or Diagnostic Products hereunder and (ii) finish and sell [***] any Licensed Antibodies, Licensed Products or Diagnostic Products remaining in inventory (provided that Celgene shall pay royalties on Annual Net Sales of such Licensed Products sold by Celgene during such period (provided that the applicable Royalty Term is still ongoing) as an to the extent Celgene would otherwise be required to pay such royalties as set forth in Section 5.3); provided that, for clarity, Celgene shall have no obligation to undertake such activities, in each case of (i) and (ii), as and to the extent determined by Celgene.

10.6.2 Termination by Celgene Pursuant to Section 10.2 or 10.4. In the event this Agreement is terminated by Celgene pursuant to Section 10.2 or 10.4, upon the effective date of such termination:

(a) the Master Collaboration Agreement (if not previously expired or terminated) shall also terminate automatically with respect to the Licensed Program (but not any other Program);

(b) except as set forth in this Section 10.6.2 or Sections 10.8 or 10.9, all rights and licenses granted herein shall terminate;

(c) any and all Collaboration Specific IP shall thereafter no longer be deemed to be Collaboration Specific IP;

(d) each Party shall return or destroy all Confidential Information of the other Party as required by Article 7; and

(e) notwithstanding the foregoing provisions of this Section 10.6.2, the licenses granted to Celgene hereunder shall survive for [***] following the effective date of termination in order for Celgene (and its Affiliates, Sublicensees and distributors), at Celgene's discretion, during the [***] period immediately following the effective date of termination, to (i) finish or otherwise wind-down any ongoing Clinical Trials with respect to any Licensed Antibodies, Licensed Products or Diagnostic Products hereunder and (ii) finish and sell [***] any Licensed Antibodies, Licensed Products or Diagnostic Products remaining in inventory (provided that Celgene shall pay royalties on Annual Net Sales of such Licensed Products sold by Celgene during such period (provided that the applicable Royalty Term is still ongoing) as an

to the extent Celgene would otherwise be required to pay such royalties as set forth in Section 5.3); provided that, for clarity, Celgene shall have no obligation to undertake such activities, in each case of (i) and (ii), as and to the extent determined by Celgene.

10.7 Certain Additional Remedies of Celgene in Lieu of Termination. In the event that (i) Celgene notifies Prothena in writing of a material breach of this Agreement by Prothena, and (ii) Celgene would have the right to terminate this Agreement pursuant to Section 10.2, then in lieu of Celgene terminating pursuant to Section 10.2, and without limiting any other rights or remedies of Celgene, Celgene may elect to have this Agreement continue in full force and effect by providing written notice thereof to Prothena; provided, however, that if Celgene so elects to continue this Agreement, [***].

10.8 Prothena Reversion Antibodies. If this Agreement terminates, except for any termination by Celgene pursuant to Section 10.2 or 10.4, then the provisions of this Section 10.8 (and for the avoidance of doubt, the provisions of this Section 10.8 shall not apply in the case of termination by Celgene pursuant to Section 10.2 or 10.4).

10.8.1 Reversion. All Licensed Program Antibodies that were the subject of Clinical Trials conducted by Celgene pursuant to this Agreement shall be automatically and immediately deemed "**Prothena Reversion Antibodies**". Celgene shall grant and hereby grants to Prothena a non-exclusive, royalty-free, license in the Territory, with the right to grant sublicenses through multiple tiers, under any Patents and/or Know-How Controlled by Celgene or its Affiliates as of the termination effective date claiming or covering [***], into the Prothena Reversion Antibodies as they exist as of such termination effective date, solely as necessary to research, Develop, Manufacture, use, import, offer for sale, sell, and Commercialize Prothena Reversion Antibodies [***] in the Field in the Territory [***].

10.8.2 Effects of Reversion. With respect to each Prothena Reversion Antibody:

(a) Except to the extent not permitted pursuant to any agreements between Celgene and a Third Party, Celgene shall provide to Prothena, within a reasonable time, at Prothena's request (provided that such request was made within [***] days after the effective date of termination), subject to [***], copies of (i) [***] Clinical Trial data and results generated by or on behalf of Celgene or its Affiliates in the Development of Prothena Reversion Antibodies pursuant to this Agreement, and (ii) [***] relating to the manufacture of such Prothena Reversion Antibodies; in each case, to the extent in Celgene's possession as of the termination effective date [***]. For clarity, Prothena shall have the right to use the foregoing material information and data solely in connection with the exercise of Prothena's rights under Section 10.8.1;

(b) Celgene shall transfer within a reasonable time to Prothena, at Prothena's request (provided that such request was made within [***] days after the effective date of termination), [***], [***] Regulatory Filings [***] for the Prothena Reversion Antibodies [***] by Celgene or its Affiliates as of the termination effective date [***];

(c) Celgene shall otherwise cooperate reasonably with Prothena to provide a transfer of the materials described in the foregoing provisions of this Section 10.8.2 [***];

(d) As and to the extent a Third Party is Manufacturing such Prothena Reversion Antibody for Celgene or its Affiliate, Celgene shall use reasonable efforts, at Prothena's request (provided that such request was made within [***] days after the effective

date of termination) [***], to [***]. Additionally, at Prothena's request (provided that such request was made within [***] days after the effective date of termination), Celgene shall transfer to Prothena [***] such Prothena Reversion Antibody owned by Celgene and then in Celgene's possession, for a price equal to [***];

(e) To the extent that Celgene or its Affiliate owns any trademark(s) and/or domain names that [***] a Prothena Reversion Antibody that [***]for the Commercialization of a Prothena Reversion Antibody (as [***], but not including any marks that include, in whole or part, any corporate name or logo of Celgene or its Affiliate), Prothena shall have the right to [***]. Prothena shall exercise such right by written notice to Celgene within [***] days after such Licensed Antibody or Licensed Product becomes a Prothena Reversion Antibody; and

(f) If Celgene or its Affiliate has obtained a license from a Third Party and Prothena is a sublicensee under such license pursuant to Section 10.8.1, then [***]. [***]. Notwithstanding the provisions of Section 10.8.1, Prothena shall not get a sublicense of any Third Party intellectual property pursuant to Section 10.8.1 unless such sublicense is allowed pursuant to and in accordance with the agreement between Celgene and such Third Party.

10.9 Surviving Provisions.

10.9.1 Accrued Rights; Remedies. Termination or expiration of this Agreement for any reason shall be without prejudice to any rights that shall have accrued to the benefit of any Party prior to such termination or expiration, and any and all damages or remedies (whether in law or in equity) arising from any breach hereunder, each of which shall survive termination or expiration of this Agreement. Such termination or expiration shall not relieve any Party from obligations which are expressly indicated to survive termination or expiration of this Agreement. Except as otherwise expressly set forth in this Agreement, the termination provisions of this Article 10 are in addition to any other relief and remedies available to either Party under this Agreement and at Applicable Law.

10.9.2 Survival. Without limiting the provisions of Section 10.9.1, the rights and obligations of the Parties set forth in the following Sections and Articles of this Agreement shall survive the expiration or termination of this Agreement, in addition to those other terms and conditions that are expressly stated to survive termination or expiration of this Agreement: ARTICLE 1 (to the extent the definitions are used in other surviving provisions), Section 2.2.4 (in the case of expiration only), Section 2.3.5(a) (solely as to the last sentence therein) ARTICLE 5 (as to payment obligations accrued prior to the effectiveness of termination or expiration of this Agreement), Section 6.3, Section 6.4, Section 6.5, Section 6.6, Section 6.12 (solely if there is no U.S. License Agreement or other Global License Agreement covering the applicable Joint Patents), ARTICLE 7, Section 8.6, ARTICLE 9, Section 10.1.2, Section 10.6, Section 10.8, Section 10.9, Section 10.10, Section 10.11, Section 10.12 and ARTICLE 11.

10.10 Milestone Payments. Notwithstanding anything to the contrary contained herein, in the event notice of termination of this Agreement is given prior to achievement of a given milestone set forth in Section 5.4 or 5.5, Celgene shall not be obligated to make any Regulatory Milestone Payment or Sales Milestone Payment to Prothena with respect to any milestone achieved following the notice of such termination.

10.11 Relationship to Other Agreements. Termination of this Agreement shall not affect in any way the terms or provisions of any other then-existing executed Global License Agreements or U.S. License Agreements.

10.12 Termination for Safety Reason. Either Party may suspend conduct of any Development activity delegated to a Party hereunder, and [***] further may terminate [***], upon written notice to the other Party based on a Safety Reason. In the event of such suspension or notice of termination for a Safety Reason, prior to the suspending or terminating Party providing written notice, each Party's safety committee shall, [***]. The Party suspending the conduct of a Development activity for a Safety Reason shall be responsible [***] for the suspension, and Celgene (or the applicable Affiliate or Sublicensee of Celgene) shall be responsible [***] for the wind-down of any Development of the applicable Licensed Antibody or Licensed Product (including any Clinical Trials for the applicable Licensed Product being conducted by or on behalf of Celgene) and any Commercialization activities for the applicable Licensed Product. In the event of a termination under this Section 10.12, such termination shall become effective [***]. [***]. Notwithstanding anything to the contrary in this Agreement, if Celgene (or any Affiliate or Sublicensee) terminates [***] for a Safety Reason, (a) the license granted [***] shall terminate and be of no effect as of the effective date of such termination; provided that, at the request of [***], [***]will enter into discussions with [***] about a license to [***] set forth in [***] but will not be obligated to grant a license to any such [***]; and (b) [***] shall not apply. For clarity, the Parties acknowledge and agree that, notwithstanding the terms set forth in the Form of U.S. License Agreement and Form of Global License Agreement attached to the Master Collaboration Agreement, any U.S. License Agreements and Global License Agreements entered into following the date hereof shall reflect the terms and conditions agreed upon in this Section 10.12.

ARTICLE 11
MISCELLANEOUS

11.1 Severability

. If any one or more of the terms or provisions of this Agreement is held by a court of competent jurisdiction to be void, invalid or unenforceable in any situation in any jurisdiction, such holding shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the invalid, void or unenforceable term or provision in any other situation or in any other jurisdiction, and the term or provision shall be considered severed from this Agreement solely for such situation and solely in such jurisdiction. If the final judgment of such court declares that any term or provision hereof is invalid, void or unenforceable, the Parties agree to (a) reduce the scope, duration, area or applicability of the term or provision or to delete specific words or phrases to the minimum extent necessary to cause such term or provision as so reduced or amended to be enforceable, and (b) make a good faith effort to replace any invalid, void or unenforceable term or provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering this Agreement may be realized.

11.2 Notices

. Any notice required or permitted to be given by this Agreement shall be in writing and in English and shall be (a) delivered by hand or by overnight courier with tracking capabilities, (b) mailed postage prepaid by first class, registered, or certified mail, or (c) delivered by facsimile followed by delivery via either of the methods set forth in Sections 11.2(a) and (b), in each case, addressed as set forth below unless changed by notice so given:

If to Celgene:

Celgene Switzerland LLC
c/o Bristol-Myers Squibb Company

430 East 29th Street
14th Floor, NY, NY 10016
Attention: [***]

With copies to:

Bristol-Myers Squibb Company
Route 206 and Province Line Road
Princeton, NJ 08543-4000
Attention: Executive Vice President, Strategy & Business Development

and

Bristol-Myers Squibb Company
Route 206 and Province Line Road
Princeton, NJ 08543-4000
Attention: Senior Vice President & Associate General Counsel, Transactions Law

If to Prothena:

Prothena Biosciences Limited
77 Sir John Rogerson's Quay, Block C
Grand Canal Docklands
Dublin 2, D02 VK60
Ireland
Attention: Company Secretary

With copies to:

Prothena Biosciences Inc.
331 Oyster Point Boulevard
South San Francisco, CA, 94080
U.S.A.
Attention: Legal Department

Any such notice shall be deemed given on the date received, except any notice received after 5:30 p.m. (in the time zone of the receiving party) on a Business Day or received on a non-Business Day shall be deemed to have been received on the next Business Day. A Party may add, delete, or change the person or address to which notices should be sent at any time upon written notice delivered to the other Parties in accordance with this Section 11.2.

11.3 Force Majeure

. A Party shall not be liable for delay or failure in the performance of any of its obligations hereunder if such delay or failure is due to a cause beyond the reasonable control of such Party,

including acts of God, fires, earthquakes, epidemics, pandemics ([***]), acts of war, terrorism, or civil unrest, or hurricane or other inclement weather ("**Force Majeure**"); provided, however, that the affected Party promptly notifies the other Party and further provided that the affected Party shall use its commercially reasonable efforts to avoid or remove such causes of non-performance and to mitigate the effect of such occurrence, and shall continue performance in accordance with the terms of this Agreement whenever such causes are removed. When such circumstances arise, the Parties shall negotiate in good faith any modifications of the terms of this Agreement that may be necessary or appropriate in order to arrive at an equitable solution.

11.4 Assignment.

11.4.1 Generally. Except as expressly permitted herein, this Agreement may not be assigned or transferred by any Party, nor may any Party assign or transfer any rights or obligations created by this Agreement, except as expressly permitted hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld.

11.4.2 Celgene. Notwithstanding the limitations in Section 11.4.1, and subject to Section 5.6.2 and the remaining provisions of this Section 11.4.2, Celgene may assign or transfer this Agreement, or any rights or obligations hereunder in whole or in part, to (a) one or more Affiliates (provided, however, that Celgene shall remain fully and unconditionally liable and responsible to the non-assigning Party hereto for the performance and observance of all such duties and obligations by such Affiliate); or (b) its successor in interest in connection with its merger, consolidation, or sale of all or substantially all of its assets or that portion of its business pertaining to the subject matter of this Agreement.

11.4.3 Prothena. Notwithstanding the limitations in Section 11.4.1, and subject to Section 5.6.2 and the remaining provisions of this Section 11.4.3, Prothena may assign or transfer this Agreement, or any rights or obligations hereunder in whole or in part, to (a) one or more Affiliates (provided, however, Prothena shall remain fully and unconditionally liable and responsible to the non-assigning Party hereto for the performance and observance of all such duties and obligations by such Affiliate); or (b) its successor in interest in connection with its merger, consolidation, or sale of all or substantially all of its assets.

11.4.4 Intellectual Property of Acquiror. Notwithstanding anything to the contrary in this Agreement, if a Party undergoes a Change of Control with, or is otherwise acquired by a Third Party after the Effective Date, then with respect to any intellectual property rights controlled by such Third Party or its Affiliates (other than one of the Parties to this Agreement or any of its Affiliates immediately prior to such transaction), such intellectual property rights shall not be included in the technology and intellectual property rights licensed to the other Party hereunder to the extent held immediately prior to such transaction by such Third Party or any of its Affiliates(other than the relevant Party to this Agreement or any of its Affiliates immediately prior to such transaction), and developed outside the scope of activities conducted with respect to the Collaboration, any Program, any U.S. License Agreement or any Global License Agreement. The Prothena IP shall also exclude any intellectual property developed or obtained by such Third Party or any of its Affiliates (other than Prothena or any of its Affiliates immediately prior to such transaction); provided that, (a) such intellectual property is developed independently of the activities under this Agreement, the Collaboration, any Program, the Master Collaboration Agreement, any U.S. License Agreement or any Global License Agreement and without use of any Prothena Licensed Collaboration IP, the Licensed Target, any Licensed Antibody or any Licensed Product (including the composition of matter or method of use thereof), or any Licensed Program IP, Joint Program IP, Joint Know-How or Joint Patents or any Celgene IP or any Confidential Information of Celgene, (b) Prothena and its

Affiliates put in place firewalls and other protections to ensure that the foregoing are not used, which firewalls and other protections must be approved in advance by Celgene, with such approval not to be unreasonably withheld and (c) no personnel who are conducting any activities pursuant to this Agreement, the Master Collaboration Agreement, or any U.S. License Agreement or any Global License Agreement are involved in the conduct of the activities pursuant to which such intellectual property is developed or used.

11.4.5 All Other Assignments Null and Void. The terms of this Agreement will be binding upon and will inure to the benefit of the successors, heirs, administrators and permitted assigns of the applicable Party. Any purported assignment in violation of this Section 11.4 will be null and void *ab initio*.

11.5 Change of Control and Other Acquisition Transactions of [***].

11.5.1 Notwithstanding anything to the contrary in this Agreement, the Master Collaboration Agreement, or any other U.S. License Agreement or Global License Agreement (whether the Acquisition Transaction is completed prior to or following execution thereof), (each, a "**Transaction Agreement**"), if, following the Effective Date, [***] undergoes a Change of Control with, or is otherwise acquired (whether by merger or acquisition of all or substantially all of its shares or assets) by a Third Party (an "**Acquisition Transaction**"), and as of the date of such Acquisition Transaction or any time thereafter, such Third Party or any of its Affiliates [***] owns or has or obtains rights to [***], that, following such Acquisition Transaction, [***].

11.5.2 Without limiting Section 11.5.1 of this Agreement: [***].

11.5.3 Personnel. For purposes of Sections 4.4 and 11.4.4 of this Agreement, Section 12.4.4 of the Master Collaboration Agreement, Sections 4.4, 4.5.2 and 11.4.4 of the Form of Global License Agreement attached to the Master Collaboration Agreement, and Sections 4.4 and 11.4.4 of the Form of U.S. License Agreement attached to the Master Collaboration Agreement [***].

11.5.4 New Transaction Agreements. For clarity, the Parties acknowledge and agree that, notwithstanding the terms set forth in the Form of U.S. License Agreement and Form of Global License Agreement attached to the Master Collaboration Agreement, any U.S. License Agreements and Global License Agreements entered into following the date hereof shall reflect the terms and conditions agreed upon in this Section 11.5.

11.6 Waivers and Modifications. The failure of any Party to insist on the performance of any obligation hereunder shall not be deemed to be a waiver of such obligation. Waiver of any breach of any provision hereof shall not be deemed to be a waiver of any other breach of such provision or any other provision on such occasion or any succeeding occasion. No waiver, modification, release, or amendment of any obligation under or provision of this Agreement shall be valid or effective unless in writing and signed by the Parties.

11.7 WAIVER OF JURY TRIAL. EXCEPT AS LIMITED BY APPLICABLE LAW, EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED IN CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS

AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE AND ENFORCEMENT HEREOF.

11.8 Choice of Law; Dispute Resolution.

11.8.1 Choice of Law. This Agreement shall be governed by, enforced and construed in accordance with the laws of the State of New York without reference to any rules of conflict of laws or renvoi and excluding the United Nations Convention on Contracts for the International Sales of Goods; provided, however, that with respect to matters involving the validity or infringement of intellectual property rights in a given country, such matter may be brought in the applicable country (in accordance with Section 11.8.3) and the Applicable Laws of the applicable country shall apply (subject to Section 6.6.1).

11.8.2 Exclusive Dispute Resolution Mechanism. The Parties agree that the procedures set forth in Section 11.8.3 will be the exclusive mechanism for resolving any dispute (whether in contract, tort or otherwise), controversy or claim between the Parties arising out of or in connection with this Agreement, any Party's rights or obligations under this Agreement, breach of this Agreement or the transactions contemplated by this Agreement (each, a "**Dispute**"); provided that decisions that are subject to the decision making authority of a given Party, as expressly set forth in this Agreement, will not be subject to the provisions of Section 11.8.3 so long as such decisions are made in accordance with this Agreement.

11.8.3 Jurisdiction.

(a) Except as otherwise set forth in this Section 11.8.3, the sole jurisdiction and venue for all actions, suits and proceedings arising out of any Dispute (except in respect of an Excluded Claim, where jurisdiction is non-exclusive) will be the state and federal courts located in the Borough of Manhattan in New York, New York, USA. Each Party hereby irrevocably and unconditionally (a) consents to submit to the exclusive jurisdiction of the state and federal courts located in the Borough of Manhattan in New York, New York, USA for any action, suit or proceeding arising out of such Dispute, and (b) waives any objection to the laying of venue of any action, suit or proceeding arising out of such Dispute in the state and federal courts of the Borough of Manhattan in New York, New York, USA and agrees not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum. Each of the Parties agrees that process may be served upon it in the manner specified in Section 11.2 and irrevocably waives and covenants not to assert or plead any objection which it might otherwise have to such jurisdiction, or to such manner of service of process. It shall be a condition precedent to the commencement of any action in court or other tribunal (save an action for an interim injunction or provisional relief) in respect of any Dispute relating to this Agreement that the Parties have sought to resolve the Dispute by either Party notifying the other Party in writing for resolution to the Executive Officers who shall meet (whether in person or via teleconference) within [***] Business Days of such notice to seek resolution in good faith. If the Executive Officers are unable to resolve the Dispute at such meeting, either Party may pursue any remedy available to such Party at law or in equity, subject to the terms and conditions of this Agreement, including this Section 11.8.3.

(b) Notwithstanding the provisions of Section 11.8.3(a), either Party may, without waiving any remedy under this Agreement, seek from any court having jurisdiction any equitable relief, including any injunctive or provisional relief and specific performance to protect the rights or property of that Party. Such remedies will not be deemed to be the exclusive remedies for a breach of this Agreement but will be in addition to all other remedies available at law or equity. In addition, notwithstanding the provisions of Section 11.8.3(a) either Party may

bring an action in any court having jurisdiction to enforce an award rendered pursuant to Section 11.8.3(a).

(c) Until final resolution of the dispute through judicial determination, (i) this Agreement will remain in full force and effect and (ii) the time periods for cure as to any termination will be tolled. The Parties further agree that any payments made pursuant to this Agreement pending resolution of the dispute shall be refunded if a court determines that such payments are not due.

(d) As used in this Section 11.8, the term "**Excluded Claim**" means a dispute, controversy or claim that concerns (i) the validity or infringement of a Patent, trademark or copyright, or (ii) any antitrust, anti-monopoly or competition law or regulation, whether or not statutory.

11.9 Relationship of the Parties. Prothena and Celgene are independent contractors under this Agreement. Nothing contained herein is intended or is to be construed so as to constitute (a) Prothena as a partner, agent, or joint venturer of Celgene or (b) Celgene as a partner, agent or joint venturer of Prothena. Neither Prothena nor Celgene, respectively, shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of Celgene or Prothena, respectively, or to bind Celgene or Prothena, respectively, to any contract, agreement, or undertaking with any Third Party.

11.10 Third Party Beneficiaries. There are no express or implied Third Party beneficiaries hereunder. The provisions of this Agreement are for the exclusive benefit of the Parties, and no other person or entity shall have any right or claim against any Party by reason of these provisions or be entitled to enforce any of these provisions against any Party.

11.11 Entire Agreement. This Agreement, together with the attached Exhibits and Schedules and the Master Collaboration Agreement, contains the entire agreement by the Parties with respect to the subject matter hereof and supersedes any prior express or implied agreements, understandings and representations, either oral or written, which may have related to the subject matter hereof in any way, including any and all term sheets relating to the transactions contemplated by this Agreement and exchanged between the Parties prior to the Effective Date. In the event of a conflict between the provisions of this Agreement and the Master Collaboration Agreement with respect to the Licensed Program, the provisions of this Agreement shall control.

11.12 Counterparts

. This Agreement may be executed in counterparts with the same effect as if both Parties had signed the same document. All such counterparts shall be deemed an original, shall be construed together, and shall constitute one and the same instrument. Any such counterpart, to the extent delivered by means of a fax machine or by .pdf, .tif, .gif, .jpeg or similar attachment to electronic mail (any such delivery, an "**Electronic Delivery**") shall be treated in all manner and respects as an original executed counterpart and shall be considered to have the same binding legal effect as if it were the original signed version thereof delivered in person. No Party hereto shall raise the use of Electronic Delivery to deliver a signature or the fact that any signature or agreement or instrument was transmitted or communicated through the use of Electronic Delivery as a defense to the formation of a contract, and each Party forever waives any such defense, except to the extent that such defense relates to lack of authenticity.

11.13 Equitable Relief

; Cumulative Remedies. Notwithstanding anything to the contrary herein, the Parties shall be entitled to seek equitable relief, including injunction and specific performance, as a remedy for any breach of this Agreement. Such remedies shall not be deemed to be the exclusive remedies for a breach of this Agreement but shall be in addition to all other remedies available at law or equity. The Parties further agree not to raise as a defense or objection to the request or granting of such relief that any breach of this Agreement is or would be compensable by an award of money damages. No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under Applicable Law.

11.14 Interpretation.

11.14.1 Generally. This Agreement has been diligently reviewed by and negotiated by and among the Parties, and in such negotiations each of the Parties has been represented by competent (in-house or external) counsel, and the final agreement contained herein, including the language whereby it has been expressed, represents the joint efforts of the Parties and their counsel. Accordingly, in interpreting this Agreement or any provision hereof, no presumption shall apply against any Party as being responsible for the wording or drafting of this Agreement or any such provision, and ambiguities, if any, in this Agreement shall not be construed against any Party, irrespective of which Party may be deemed to have authored the ambiguous provision.

11.14.2 Definitions; Interpretation. The definitions of the terms herein shall apply equally to the singular and plural forms of the terms defined and where a word or phrase is defined herein, each of its other grammatical forms shall have a corresponding meaning. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine, and neuter forms. The word “will” shall be construed to have the same meaning and effect as the word “shall.” The word “any” shall mean “any and all” unless otherwise clearly indicated by context. The words “including,” “includes,” “include,” “for example,” and “e.g.” and words of similar import will be deemed to be followed by the words “without limitation.” The word “or” is disjunctive but not necessarily exclusive. The words “hereof,” “herein” and “herewith” and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole and not to any particular provision of this Agreement. Unless the context requires otherwise or otherwise specifically provided, (i) all references herein to Articles, Sections, Schedules or Exhibits shall be construed to refer to Articles, Sections, Schedules and Exhibits of this Agreement and (ii) reference in any Section to any subclauses are references to such subclauses of such Section.

11.14.3 Subsequent Events. Unless the context requires otherwise, (i) any definition of or reference to any agreement, instrument, or other document herein shall be construed as referring to such agreement, instrument, or other document as from time to time amended, supplemented, or otherwise modified (subject to any restrictions on such amendments, supplements, or modifications set forth herein), (ii) any reference to any Applicable Law herein shall be construed as referring to such Applicable Law as from time to time enacted, repealed, or amended, and (iii) any reference herein to any Person shall be construed to include the Person’s successors and assigns (subject to Section 11.4).

11.14.4 Headings. Headings, captions and the table of contents are for convenience only and are not to be used in the interpretation of this Agreement.

11.14.5 Prior Drafts. No prior draft of this Agreement nor any course of performance or course of dealing shall be used in the interpretation or construction of this Agreement.

11.14.6 Independent Significance. Although the same or similar subject matters may be addressed in different provisions of this Agreement, the Parties intend that, except as reasonably apparent on the face of the Agreement or as expressly provided in this Agreement, each such provision shall be read separately, be given independent significance and not be construed as limiting any other provision of this Agreement (whether or not more general or more specific in scope, substance or content).

11.15 Further Assurances. Each Party shall execute, acknowledge and deliver such further instruments, and do all such other ministerial, administrative or similar acts, as may be reasonably necessary or appropriate in order to carry out the expressly stated purposes and the clear intent of this Agreement.

11.16 Extension to Affiliates. Subject to Sections 5.6.2 and 11.4, Celgene shall have the right to extend the rights, licenses, immunities and obligations granted in this Agreement to one or more of its Affiliates. All applicable terms and provisions of this Agreement shall apply to any such Affiliate to which this Agreement has been extended to the same extent as such terms and provisions apply to Celgene. Celgene shall remain fully liable for any acts or omissions of such Affiliates.

11.17 Financial Transparency. Prothena acknowledges that Celgene is subject to applicable laws related to the collection and reporting of any payments or transfers of value to certain healthcare providers and teaching hospitals (collectively, "**Financial Transparency Laws**"), which include, without limitation, relevant provisions of the Affordable Care Act of 2010 and its implementing regulations for the United States along with similar laws and regulations in other countries. Prothena shall reasonably cooperate with Celgene, at Celgene' cost for Prothena's reasonable expenses, in its compliance with Financial Transparency Laws and promptly provide any information reasonably requested by Celgene in connection with this Agreement in a mutually agreed upon format to the extent reasonably necessary for Celgene to comply with its obligations under the Financial Transparency Laws. Celgene shall have the right to allocate payments or other transfers of value in connection with this Agreement in any required reporting under Financial Transparency Laws in accordance with its normal business practices.

[Signature Page Follows]

IN WITNESS WHEREOF, and intending to be legally bound hereby, the Parties have caused this GLOBAL LICENSE AGREEMENT to be executed by their respective duly authorized officers as of the Effective Date.

PROTHENA BIOSCIENCES LIMITED	**CELGENE SWITZERLAND LLC**
By: /s/ Olivia Waldron	By: /s/ Janeen Doyle
Name: Olivia Waldron	Name: Janeen Doyle
Title: Assistant Company Secretary	Title: Authorized Signatory

[Signature Page to Global License Agreement]

Schedule 1.27

Existing IND

US IND Number 153389, filed on April 28, 2021.

Clinical Trial Application with associated EudraCT number 2022-001827-34, which was approved by the Swedish Medical Products Agency on November 16, 2022.

Schedule 1.28

Existing Program Agreements

[***]

Schedule 1.39

In-License Agreements and Other Third Party Agreements

[***]

Schedule 1.44

Licensed Program Antibodies

[***]

Schedule 1.46(b)

Licensed Program Patents

[***]

Schedule 1.48

Licensed Target

[***]

Schedule 1.63

Prothena Licensed Collaboration Patents

[***]

Schedule 1.65

Prothena Platform Technology

[***]

Schedule 8.2

Exceptions to Prothena Representations and Warranties

[***]

Schedule 8.4

Exceptions to Celgene Representations and Warranties

[***]

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a)/15d-14(a), AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Gene G. Kinney, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Prothena Corporation plc;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2023

/s/ Gene G. Kinney

Gene G. Kinney

President and Chief Executive Officer

(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a)/15d-14(a), AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Tran B. Nguyen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Prothena Corporation plc;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2023

/s/ Tran B. Nguyen

Tran B. Nguyen
Chief Financial Officer
(Principal Financial Officer)

Exhibit 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

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Gene G. Kinney, President and Chief Executive Officer of Prothena Corporation plc (the "Company") and Tran B. Nguyen, Chief Financial Officer of the Company, each hereby certify that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2023, to which this Certification is attached as Exhibit 32.1 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 2, 2023

/s/ Gene G. Kinney

Gene G. Kinney
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Tran B. Nguyen

Tran B. Nguyen
Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.