February 14, 2017

Prothena Reports Fourth Quarter and Full Year 2016 Financial Results, and Provides Financial Guidance and R&D Update

- **Net cash used in operating and investing activities was $41.1 million in the fourth quarter and $133.9 million for the full year 2016; year-end cash and restricted cash position of $391 million supports advancement of clinical pipeline**
- **Presented results in an oral presentation at ASH from the Phase 1/2 study of NEOD001 demonstrating improvement in three organ systems (cardiac, renal and peripheral nerve) in previously treated patients with AL amyloidosis**
- **Reported top-line results from the Phase 1b study of PRX002 demonstrating robust antibody central nervous system penetration and rapid, dose- and time-dependent mean reduction in levels of free serum alpha-synuclein of up to 97 percent in patients with Parkinson's disease**
- **Initiated a Phase 1b multiple ascending dose, proof-of-biology study of PRX003 in patients with psoriasis, following presentation of Phase 1a single ascending dose study in healthy volunteers demonstrating target engagement**
- **Appointed Gene G. Kinney, PhD President, Chief Executive Officer and Director**

DUBLIN, Ireland, Feb. 14, 2017 (GLOBE NEWSWIRE) -- Prothena Corporation plc (NASDAQ:PRTA), a late-stage clinical biotechnology company focused on the discovery, development and commercialization of novel protein immunotherapies, today reported financial results for the fourth quarter and full year 2016. In addition, the Company provided 2017 financial guidance and an update on its R&D programs.

"In 2016 we were saddened by the loss of Dale Schenk, PhD, our friend and former CEO, and a true scientific pioneer," said Gene Kinney, PhD, President and Chief Executive Officer of Prothena. "As a testament to our team's talent and commitment, our business continued to gain momentum and 2016 was a year of significant progress where we reported positive data for each of our three clinical programs. As our pipeline continues to mature, several key milestones in 2017 and into 2018 keep us on track towards our goal of delivering novel disease modifying therapies to patients. For NEOD001 in patients with AL amyloidosis, we expect to complete enrollment in the PRONTO study during the next several weeks and in the VITAL study during the second quarter. Also in 2017, for PRX002/RG7935, we expect to initiate, with our partners at Roche, a Phase 2 clinical study in patients with Parkinson's disease. For PRX003 we expect to report full topline results from a Phase 1b multiple ascending dose, proof-of-biology study in patients with psoriasis, and for PRX004 we continue to advance our preclinical work toward the start of a Phase 1 clinical study in patients with ATTR amyloidosis."

Full Year 2016 and Recent Highlights:

NEOD001 is a monoclonal antibody for the potential treatment of AL amyloidosis:

- Presented positive results from the Phase 1/2 study of NEOD001 in patients with AL amyloidosis and persistent organ dysfunction in an oral presentation by Morie A. Gertz, MD, of Mayo Clinic at the 58th Annual American Society of Hematology (ASH) meeting. The results demonstrated best response rates of 53 percent and 64 percent for cardiac- (n=36) and renal- (n=36) evaluable patients, respectively. Improvement in peripheral neuropathy was demonstrated by a mean 35 percent (median 23 percent, n=11) decrease in the Neuropathy Impairment Score-Lower Limb (NIS-LL) as a change from baseline to month 10, leading to an 82 percent response rate. NEOD001 continued to be safe and well tolerated. A total of 69 patients received 994 doses of NEOD001 over a mean duration of therapy of 12.8 months.
- Published preclinical data in the peer-reviewed journal *Amyloid* that further supports the proposed mechanism of action of NEOD001, demonstrating the binding and immunotherapy-mediated clearance properties of NEOD001 and the related murine form of the antibody in tissue samples from multiple organs of patients with AL amyloidosis.

PRX002/RG7935 is a monoclonal antibody for the potential treatment of Parkinson's disease and related synucleinopathies, and is the primary focus of Prothena's worldwide collaboration with Roche:

- Reported positive results from an 80-patient Phase 1b double-blind, placebo-controlled, multiple ascending dose study that supported advancing PRX002 into a Phase 2 clinical study. All dose levels had an acceptable safety and tolerability profile, meeting the primary objective of the study. Robust central nervous system penetration was demonstrated by a dose-dependent increase of PRX002 levels in cerebrospinal fluid (CSF), and a mean concentration of PRX002 in CSF of 0.3 percent relative to serum across all dose levels, which exceeded our expectations based on our preclinical experience. Target engagement was further demonstrated in this study by a rapid, dose- and time-dependent mean reduction of free serum alpha-synuclein levels of up to 97 percent after a single dose, which was statistically significant ($p<0.0001$), and maintained following two additional monthly doses.

- Published clinical results from the first-in-human assessment of PRX002 in the peer-reviewed journal *Movement Disorders.*

PRX003 is a monoclonal antibody for the potential treatment of inflammatory diseases, including psoriasis and psoriatic arthritis:

- In an oral session at the European League Against Rheumatism (EULAR) 17th Annual European Congress of Rheumatology, presented positive results from a Phase 1 clinical study of PRX003 in healthy volunteers that demonstrated PRX003 was safe and well-tolerated following a single infusion, up to and including the highest dose level tested. Results from this study showed that administration of PRX003 led to greater than 95 percent neutralization of CD146 at saturating drug exposures. CD146 is a cell adhesion molecule which is expressed on the surface of Th17 cells. The data from this study also demonstrated a statistically significant ($p<0.0001$) dose- and time-dependent duration of downregulation of CD146 on Th17 cells.

- Presented preclinical data for PRX003 at the American Academy of Allergy, Asthma & Immunology (AAAAI) 2016 Annual Meeting demonstrating the ability of PRX003 to inhibit migration of disease-causing T cells.

PRX004 is a monoclonal antibody for the potential treatment of ATTR amyloidosis**:**

- In an oral session at the 6th International Charcot-Marie-Tooth and Related Neuropathy Consortium (CMTR) meeting, presented preclinical data from a series of novel, conformation-specific protein immunotherapy antibodies that selectively bind to amyloidogenic (diseased) forms of the transthyretin (ATTR) protein in tissues from ATTR amyloidosis patients.

- Published preclinical data from a series of novel, conformation-specific protein immunotherapy antibodies that selectively bind to amyloidogenic (diseased) forms of the transthyretin (ATTR) protein in the peer-reviewed journal *Amyloid*.

Corporate:

- Appointed Gene G. Kinney, Ph.D. as President, Chief Executive Officer and as a member of the Board. Dr. Kinney was a founding member of Prothena's leadership team, and has served as Prothena's Chief Scientific Officer and Head of Research and Development, and also as Chief Operating Officer.

- Appointed Carol D. Karp as Chief Regulatory Officer to lead Prothena's Regulatory, Quality and Safety functions. Ms. Karp brings an extensive and successful track record of leading global registration activities for innovative new products in the biotechnology and pharmaceutical sectors.

Upcoming Research and Development Milestones

Prothena's pipeline includes four protein immunotherapy programs.

NEOD001

- Complete planned enrollment (N=100) in the Phase 2b PRONTO study expected during the last week of February 2017. At that time, patients already in screening will have an opportunity to complete this process and will be randomized into the study provided they meet eligibility requirements. The study is therefore likely to be overenrolled, with the last patient randomized in March 2017

- Topline results in the Phase 2b PRONTO study expected following the 12-month study period in the second quarter of 2018

- Complete enrollment in the Phase 3 VITAL Amyloidosis Study expected in the second quarter of 2017

PRX002

- Phase 2 clinical study expected to begin in 2017

PRX003

- Topline results from the completed Phase 1b multiple ascending dose, proof-of-biology study in patients with psoriasis expected in the third quarter of 2017

PRX004

- Clinical development expected to begin in early 2018

Fourth Quarter and Full Year of 2016 Financial Results and 2017 Financial Guidance

Prothena reported a net loss of $48.9 million and $160.1 million for the fourth quarter and full year of 2016, respectively, as compared to a net loss of $24.2 million and $80.6 million for the fourth quarter and full year of 2015, respectively. Net loss per share for the fourth quarter and full year of 2016 was $1.41 and $4.66, respectively, as compared to a net loss per share for the fourth quarter and full year of 2015 of $0.76 and $2.66, respectively.

Prothena reported total revenue of $0.2 million and $1.1 million for the fourth quarter and full year of 2016, respectively, as compared to total revenue of $0.3 million and $1.6 million for the fourth quarter and full year of 2015, respectively. The decrease in revenue for the fourth quarter and full year of 2016 was primarily due to lower revenue from Prothena's collaboration agreement with Roche.

Research and development (R&D) expenses totaled $39.8 million and $119.5 million for the fourth quarter and full year of 2016, respectively, as compared to $17.9 million and $58.4 million for the fourth quarter and full year of 2015, respectively. The increase in R&D expenses for the fourth quarter and full year of 2016 was primarily due to increased expenses for product manufacturing, clinical trials and personnel cost. R&D expenses included non-cash share-based compensation expense of $1.9 million and $7.1 million for the fourth quarter and full year of 2016, respectively, as compared to $1.3 million and $4.3 million for the fourth quarter and full year of 2015, respectively.

General and administrative (G&A) expenses totaled $9.6 million and $41.1 million for the fourth quarter and full year of 2016, respectively, as compared to $6.6 million and $23.1 million for the fourth quarter and full year of 2015, respectively. The increase in G&A expenses for the fourth quarter and full year of 2016 was primarily due to increases in personnel costs. The full year costs included $7.7 million of non-cash share-based compensation expense related to the accelerated vesting of stock options and payments due to the estate of our former Chief Executive Officer, Dr. Dale B. Schenk, upon his passing. G&A expenses included non-cash share-based compensation expense of $3.3 million and $17.8 million in the fourth quarter and full year of 2016, respectively (including $6.5 million, of non-cash share-based compensation expense in 2016 related to the accelerated vesting of Dr. Schenk's stock options), as compared to $1.9 million and $6.1 million in the fourth quarter and full year of 2015, respectively.

Total non-cash share-based compensation expense was $5.2 million and $24.9 million for the fourth quarter and full year of 2016, respectively, as compared to $3.3 million and $10.4 million for the fourth quarter and full year of 2015, respectively.

As of December 31, 2016, Prothena had $391.0 million in cash, cash equivalents and restricted cash and no debt.

As of February 10, 2017, Prothena had approximately 35.0 million ordinary shares outstanding.

The Company expects the full year 2017 net cash burn from operating and investing activities to be $160 to $170 million, including an expected milestone payment from Roche upon initiation of the Phase 2 study of PRX002, and ending the year with approximately $224 million in cash (mid-point). The estimated full year 2017 net cash burn from operating and investing activities is primarily driven by an estimated net loss of $177 to $191 million, which includes an estimated $26 million of non-cash share-based compensation expense.

Upcoming Investor Conferences

Members of the senior management team will present and participate in investor meetings at the following upcoming investor conferences:

- **RBC Capital Markets 2017 Global Healthcare Conference** on February 22, 2017 at 1:35 PM ET in New York, NY.

- **Barclays Global Healthcare Conference** on March 16, 2017 at 10:15 AM ET in Miami, FL.
- **Oppenheimer 27th Annual Healthcare Conference** on March 21, 2017 at 8:35 AM ET in New York, NY.

A live webcast of the presentations can be accessed through the investor relations section of the Company's website at www.prothena.com. Following the live presentations, a replay of the webcast will be available on the Company's website for at least 90 days following the presentation date.

Conference Call Details

Prothena management will discuss these results and its 2017 outlook in a live audio webcast and conference call today, Tuesday, February 14, 2017, at 4:30 PM ET. The webcast will be made available on the Company's website at www.prothena.com under the Investors tab in the Events and Presentations section. Following the live audio webcast, a replay will be available on the Company's website for 90 days.

To access the call via dial-in, please dial (877) 887-5215 (U.S. toll free) or (315) 625-3069 (international) five minutes prior to the start time and refer to conference ID number 56336849. A replay of the call will be available until February 28, 2017 via dial-in at (855) 859-2056 (U.S. toll free) or (404) 537-3406 (international), Conference ID Number 56336849.

About Prothena

Prothena Corporation plc is a global, late-stage clinical biotechnology company establishing fully-integrated research, development and commercial capabilities. Fueled by its deep scientific understanding built over decades of research in protein misfolding and cell adhesion — the root causes of many serious or currently untreatable amyloid and inflammatory diseases — Prothena seeks to fundamentally change the course of progressive diseases associated with this biology. The Company's pipeline of antibody therapeutic candidates targets a number of indications including AL amyloidosis (NEOD001), Parkinson's disease and other related synucleinopathies (PRX002), inflammatory diseases, including psoriasis and psoriatic arthritis (PRX003), and ATTR amyloidosis (PRX004). The company continues discovery of additional novel therapeutic candidates where its deep scientific understanding of disease pathology can be leveraged. For more information, please visit the company's website at www.prothena.com.

Forward-looking Statements

This press release contains forward-looking statements. These statements relate to, among other things, our goal of delivering therapies to patients; the sufficiency of our cash position; the timing of completing enrollment in the Phase 2b and Phase 3 studies and announcing topline results from the Phase 2b study of NEOD001; the timing of initiating a Phase 2 study of PRX002; the timing of announcing full topline results from the Phase 1b study of PRX003; the timing of advancing PRX004 into a Phase 1 clinical study; our anticipated net cash burn from operating and investing activities for 2017 and expected cash balance at the end of 2017; and our estimated net loss and non-cash share-based compensation expense for 2017. These statements are based on estimates, projections and assumptions that may prove not to be accurate, and actual results could differ materially from those anticipated due to known and unknown risks, uncertainties and other factors, including but not limited to the risks, uncertainties and other factors described in the "Risk Factors"" sections of our Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on February 25, 2016, our subsequent Quarterly Reports on Form 10-Q filed with the SEC and our Annual Report on Form 10-K to be filed with the SEC for our fiscal year 2016. Prothena undertakes no obligation to update publicly any forward-looking statements contained in this press release as a result of new information, future events or changes in Prothena's expectations.

PROTHENA CORPORATION PLC
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited - amounts in thousands except per share data)

	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2016	2015	2016	2015
Collaboration revenue	$ 171	$ 307	$ 1,055	$ 1,607
Revenue—related party	—	—	—	—
Total revenue	171	307	1,055	1,607
Operating expenses:				
Research and development	39,844	17,890	119,534	58,439
General and administrative	9,604	6,629	41,056	23,105
Total operating expenses	49,448	24,519	160,590	81,544

Loss from operations	(49,277)	(24,212)	(159,535)	(79,937)
Other income, net:	727	57	571	26
Loss before income taxes	(48,550)	(24,155)	(158,964)	(79,911)
Provision for income taxes	353	2	1,144	701
Net loss	$ (48,903)	$ (24,157)	$ (160,108)	$ (80,612)
Basic and diluted net loss per share	$ (1.41)	$ (0.76)	$ (4.66)	$ (2.66)
Shares used to compute basic and diluted net loss per share	34,603	31,611	34,351	30,326

PROTHENA CORPORATION PLC
CONSOLIDATED BALANCE SHEETS
(unaudited - amounts in thousands)

	December 31,	
	2016	**2015**
Assets		
Cash and cash equivalents	$386,923	$370,586
Other current assets	4,439	6,817
Total current assets	391,362	377,403
Property and equipment, net	56,452	3,862
Restricted cash	4,056	—
Other assets	8,106	3,971
Total non-current assets	68,614	7,833
Total assets	$459,976	$385,236
Liabilities and Shareholders' Equity		
Accrued research and development	$ 19,073	$ 12,794
Other current liabilities	22,002	9,422
Total current liabilities	41,075	22,216
Non-current liabilities:	53,498	2,351
Total liabilities	94,573	24,567
Total shareholders' equity	365,403	360,669
Total liabilities and shareholders' equity	$459,976	$385,236

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