November 4, 2015

Five Prime Therapeutics Reports Third Quarter 2015 Results and Provides Business Update

- *Established license and collaboration agreement with Bristol-Myers Squibb for FPA008: $1.74 billion in upfront and milestone payments, double-digit royalties, and ability to continue development in PVNS and with Five Prime oncology candidates*
- *Expanded Immuno-Oncology Pipeline with New GITR Agonist Antibody Program*

SOUTH SAN FRANCISCO, Calif., Nov. 4, 2015 (GLOBE NEWSWIRE) -- Five Prime Therapeutics, Inc. (Nasdaq:FPRX), a clinical-stage biotechnology company focused on discovering and developing novel protein therapeutics for cancer and inflammatory diseases, today provided a corporate update and reported financial results for the third quarter ending September 30, 2015.

"Our accomplishments since the second quarter have been transformational for Five Prime in many ways— highlighting our ability to discover and develop candidates and combinations to drive future immuno-oncology therapies, expanding our clinical programs and immuno-oncology pipeline, and strengthening our financial base going forward to augment and accelerate all of these activities," said Lewis T. "Rusty" Williams, M.D., Ph.D., president and chief executive officer of Five Prime. "We recently announced an exciting license and collaboration agreement with Bristol-Myers Squibb (BMS) for our anti-CSF1R antibody, FPA008, which is a product of Five Prime's proprietary discovery platform and our identification of IL-34, one of the ligands that FPA008 blocks. As this agreement illustrates, we are well equipped to identify new approaches for modulating the tumor microenvironment, and we will leverage this ability as we look internally and externally at opportunities to grow our pipeline. It also demonstrates the quality of our clinical capabilities, and we look forward to continuing development of FPA008 in certain areas alongside BMS, and advancing our FPA144 and GITR programs."

Business Highlights and Recent Developments

Clinical Pipeline:

- **FPA008:** FPA008 is an antibody that inhibits colony stimulating factor-1 receptor (CSF1R) and has been shown to block the activation and survival of monocytes and macrophages *in vivo*. In particular, inhibition of CSF1R in preclinical models of several cancers reduces the number of immunosuppressive tumor-associated macrophages (TAMs) in the tumor microenvironment.
  - **Established Exclusive Worldwide License and Collaboration Agreement with Bristol-Myers Squibb (BMS) for FPA008.** In October, Five Prime and BMS entered into an exclusive worldwide license and collaboration agreement for the development and commercialization of FPA008. In addition to the $350 million upfront payment, Five Prime will be eligible to receive development and regulatory milestone payments for each anti-CSF1R antibody product as follows: up to $1.05 billion for combinations with OPDIVO® (nivolumab) and other BMS or Five Prime oncology products and up to $340 million for therapeutic uses in pigmented villonodular synovitis (PVNS) and non-oncology indications. BMS will be responsible for manufacturing and global commercialization. FivePrime will be eligible to receive tiered royalty percentages ranging from the high teens to the low twenties on future worldwide net sales of FPA008 and other anti-CSF1R antibody products developed by BMS, and retains a U.S. co-promotion option for an additional low single-digit royalty. Importantly, Five Prime will lead and execute the three trials that are currently underway and has the ability to continue development of FPA008 in PVNS, in combination with its own oncology pipeline, and in non-oncology indications. The agreement is subject to review under the Hart-Scott-Rodino Antitrust Improvements Act (HSR) and will become effective once clearance is received.
  - **Initiated Phase 1a/1b FPA008/OPDIVO Combination Trial.** In September 2015, Five Prime initiated patient dosing in the Phase 1a/1b clinical trial evaluating the immunotherapy combination of FPA008 with OPDIVO, Bristol-Myers Squibb's PD-1 immune checkpoint inhibitor, in eight tumor settings. The trial is exploring the safety, tolerability and preliminary efficacy of the combination in patients with non-small cell lung cancer, melanoma, head and neck cancer, pancreatic cancer, colorectal cancer and malignant glioma and now includes two arms of anti-PD-1 resistant patients. The trial also was featured in a trial-in-progress poster at the CRI-CIMT-EATI-AACR Inaugural International Cancer Immunotherapy Conference in September. Five Prime will continue to conduct the trial under the license agreement with BMS and expects to complete Phase 1a dose escalation and expand into Phase 1b with the selected dose of FPA008 in early 2016.
  - **Initiated Phase 1/2 Clinical Trial of FPA008 in Pigmented Villonodular Synovitis (PVNS).** In July, Five Prime initiated patient dosing in its Phase 1/2 clinical trial of FPA008 in PVNS, a CSF1R-driven tumor and an orphan indication. During the Phase 1 dose escalation portion of the trial, Five Prime is assessing safety and pharmacodynamics of selected doses of FPA008 to determine the dose for expansion. During the Phase 2 expansion, the company will evaluate tumor response rate and duration, as well as measures of pain and joint

function, in approximately 30 patients. Five Prime is entitled to continue independent development in PVNS under the BMS license agreement and expects to complete dose escalation and move into dose expansion in early 2016.
    - **Continued Dosing Rheumatoid Arthritis (RA) Patients in Open-Label Portion of Phase 1 Clinical Trial of FPA008.** During the quarter, Five Prime continued to dose FPA008 in RA patients with active disease who are on methotrexate in its Phase 1 clinical trial. The company is scheduled to present preliminary open-label data from RA patients on November 10, 2015, at the American College of Rheumatology Annual Meeting. Five Prime plans to complete the open-label portion of the trial but does not intend to proceed with a randomized cohort or to conduct additional RA trials at this time in order to focus development of FPA008 in immuno-oncology and PVNS.
- **Continued Enrollment in the Phase 1 Clinical Trial of FPA144.** Five Prime continued to enroll the Phase 1a/1b clinical trial of FPA144, a selective ADCC-enhanced antibody in development as a targeted therapy for tumors that over-express FGFR2b. By the end of 2015, the company expects to complete Phase 1a dose escalation in patients with solid tumors, including gastric cancer, and to begin the Phase 1b expansion at a selected dose in gastric cancer patients whose tumors over-express FGFR2b.
- **Initial Data from Phase 1b Clinical Trial of FP-1039/GSK3052230 Presented at World Conference on Lung Cancer.** Initial safety and efficacy data from GlaxoSmithKline's ongoing Phase 1b clinical trial of FP-1039/GSK3052230, an FGF ligand trap, were featured in an oral presentation during the World Conference on Lung Cancer in September 2015. The three-arm study is still underway in patients with newly-diagnosed or recurrent *FGFR1* gene-amplified squamous non-small cell lung cancer and malignant pleural mesothelioma.

Research Programs and Collaborations:

- **Established New GITR Antibody Program.** Five Prime established a research collaboration and license agreement for Inhibrx's novel multivalent glucocorticoid-induced tumor necrosis factor receptor (GITR) antibodies. The program is currently at lead selection stage and the company is targeting an IND for 2017. Using its comprehensive protein library and proprietary *in vivo* screening technologies, Five Prime identified the GITR pathway as one of the most potent inhibitors of tumor growth and these agonist antibodies have the potential to be additive or synergistic with other immuno-oncology therapies and candidates in Five Prime's portfolio. Five Prime paid an upfront fee of $10 million to Inhibrx in July 2015.
- **GlaxoSmithKline (GSK) and UCB Pharma (UCB) Reserved Targets Discovered by Five Prime.** In September, GSK exercised its option to reserve specific targets discovered by Five Prime under the respiratory diseases research collaboration between the companies, triggering a $300,000 payment. In September, UCB exercised its option to reserve certain targets discovered by Five Prime under its discovery collaboration with Five Prime in the area of fibrosis-related inflammatory diseases, triggering $140,000 in payments.
- **Expanded Antibody Capabilities with License to Human Antibody Generation Platforms**. The company continues to expand its antibody capabilities and internal expertise to capitalize on immuno-oncology targets identified using Five Prime's discovery platform and to move candidates rapidly toward INDs. During October, Five Prime secured a license from Open Monoclonal Technology (OMT) to access mono- and bi-specific antibody platforms and antibody repertoire sequencing technology for the generation of novel therapeutic candidates. These platforms are designed to deliver human antibodies with high affinity, specificity, expression, solubility and stability and current OMT partners include leading pharmaceutical and biotech companies.

Summary of Financial Results and Guidance:

- **Cash Position.** Cash, cash equivalents and marketable securities totaled $183.4 million on September 30, 2015 compared with $149.1 million on December 31, 2014. The increase was primarily attributable to Five Prime's January 2015 public offering of common stock, offset by cash used in operations. This does not include the $350 million upfront payment from BMS the company expects to receive under the FPA008 license and collaboration agreement.
- **Revenue.** Collaboration and license revenue for the third quarter of 2015 decreased by $0.2 million to $5.9 million from $6.1 million in the third quarter of 2014.
- **R&D Expenses.** Research and development expenses for the third quarter of 2015 increased by $14.9 million, or 152%, to $24.7 million from $9.8 million in the third quarter of 2014. This increase was primarily related to in-licensing GITR antibodies, advancing the FPA008 development program into additional indications and expanding the company's internal immuno-oncology research and preclinical activities.
- **G&A Expenses.** General and administrative expenses for the third quarter of 2015 increased by $1.8 million, or 53%, to $5.2 million from $3.4 million in the third quarter of 2014. This increase was primarily due to increases in personnel related expenses, including stock-based compensation, and facility costs.
- **Net Loss.** Net loss for the third quarter of 2015 was $24.0 million, or $0.93 per basic and diluted share, compared with a net loss of $7.1 million, or $0.33 per basic and diluted share, for the third quarter of 2014. This increase in net loss was primarily related to in-licensing GITR antibodies, advancing the FPA008 development program into additional indications and expanding internal immuno-oncology research and preclinical activities.

Updated 2015 Guidance. Five Prime expects to have in excess of $500 million in cash, cash equivalents and marketable securities upon receipt of the $350 million upfront payment under the agreement with BMS for FPA008, which we expect to receive in 2015 after HSR clearance. Five Prime currently anticipates recognizing the $350 million upfront payment from BMS as revenue in the fourth quarter of 2015 and to be able to utilize substantially all of its existing net operating loss carryforwards

to partially offset taxable income in 2015. Five Prime continues to expect full-year 2015 net cash used in operating activities to be between $65 and $70 million, without giving consideration to the $350 million upfront payment expected from BMS.

Conference Call Information

Five Prime will host a conference call and live audio webcast today at 5 p.m. (ET) / 2 p.m. (PT) to discuss its financial results and provide a corporate update. To participate in the conference call, please dial (877) 878-2269 (domestic) or (253) 237-1188 (international) and refer to conference ID 66963339. To access the live webcast please visit the "Events & Presentations" page under the "Investors" tab on Five Prime's website at www.fiveprime.com. An archived copy of the webcast will be available on Five Prime's website beginning approximately two hours after the conference call. Five Prime will maintain an archived replay of the webcast on its website for at least 30 days after the conference call.

About Five Prime

Five Prime Therapeutics, Inc. discovers and develops innovative therapeutics to improve the lives of patients with serious diseases. Five Prime's comprehensive discovery platform, which encompasses virtually every medically relevant extracellular protein, positions it to explore pathways in cancer, inflammation and their intersection in immuno-oncology, an area with significant therapeutic potential and a growing focus of the company's R&D activities. Five Prime has entered into strategic collaborations with leading global pharmaceutical companies and has promising product candidates in clinical and late preclinical development. For more information, please visit www.fiveprime.com.

Cautionary Note on Forward-looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "plan," "anticipate," "estimate," "intend" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements are based on Five Prime's expectations and assumptions as of the date of this press release. Each of these forward-looking statements involves risks and uncertainties. Actual results may differ materially from these forward-looking statements. Forward-looking statements contained in this press release include statements about (i) the timing of IND filings; (ii) the timing of initiation, progress and scope of clinical trials for Five Prime's product candidates; (iii) the reporting of clinical data regarding Five Prime's product candidates; (iv) Five Prime's full-year 2015 net cash used in operating activities; (v) the amount of Five Prime's cash, cash equivalents and marketable securities; (vi) the effectiveness of the license and collaboration agreement with BMS; and (v) the $350 million upfront payment from BMS. Many factors may cause differences between current expectations and actual results including unexpected safety or efficacy data observed during preclinical or clinical studies, clinical trial site activation or enrollment rates that are lower than expected, changes in expected or existing competition, changes in the regulatory environment, failure of Five Prime's collaborators to support or advance collaborations or product candidates, delays in the expiration or termination of the notice and waiting period under the HSR, the Federal Trade Commission or Department of Justice's challenge of the license and collaboration agreement with BMS and unexpected litigation or other disputes. Other factors that may cause Five Prime's actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in Five Prime's filings with the U.S. Securities and Exchange Commission, including the "Risk Factors" sections contained therein. Except as required by law, Five Prime assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

Five Prime Therapeutics, Inc.

Selected Balance Sheets Data

(in millions)

	September 30, 2015	December 31, 2014
Balance Sheet Data:		
Cash, cash equivalents and marketable securities	$183.4	$149.1
Total assets	195.0	155.6
Total current liabilities (excluding deferred revenue)	10.6	7.9
Deferred revenue (in total, including short term portion)	57.3	60.6
Total stockholders' equity	125.6	85.2

Five Prime Therapeutics, Inc.

Condensed Statements of Operations Data

(in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2015	**2014**	**2015**	**2014**
Collaboration and license revenue	$5.9	$6.1	$16.5	$14.6
Operating expenses:				
Research and development	24.7	9.8	49.3	30.6
General and administrative	5.2	3.4	14.0	9.7
Total operating expenses	29.9	13.2	63.3	40.3
Interest income	--	--	0.3	0.1
Net loss	$ (24.0)	$ (7.1)	$ (46.5)	$ (25.6)
Basic and diluted net loss per common share	$ (0.93)	$ (0.33)	$ (1.82)	$ (1.24)

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Source: Five Prime Therapeutics, Inc.