Aptinyx Reports Fourth Quarter and Full Year 2018 Financial Results and Highlights Pipeline and Business Progress

March 21, 2019

Completed Phase 2 study of NYX-2925 in painful DPN -- did not meet primary endpoint, but NYX-2925 demonstrated robust analgesic activity in a large and mechanistically relevant patient sub-group

Reported positive data from interim analysis of Phase 2 exploratory neuroimaging study of NYX-2925 in patients with fibromyalgia -- study completion and data expected in 1H 2019

Confirmed novel NMDAr modulatory mechanism in humans through EEG studies in healthy volunteers

Initiated first-in-patient Phase 2a study of NYX-783 in patients with PTSD -- data expected in 1H 2020

Nearing completion of Phase 1 study of NYX-458in healthy volunteers -- data expected in 1H 2019

Conference call today at 8:00 a.m. ET

EVANSTON, Ill., March 21, 2019 (GLOBE NEWSWIRE) -- Aptinyx Inc. (NASDAQ: APTX), a clinical-stage biopharmaceutical company developing transformative therapies for the treatment of brain and nervous system disorders, today reported financial results for the fourth quarter and full year 2018 and announced recent business highlights.

“This past year was marked by a number of important clinical and preclinical study results showing activity and safety of the product candidates in our pipeline, informing our ongoing development of innovative therapies for CNS disorders that are vastly underserved by the treatments available today,” said Norbert Riedel, Ph.D., president and chief executive officer at Aptinyx. “We learned that NYX-2925 is active in the human brain in a manner that is highly relevant in pain processing, that it has excellent safety in both healthy volunteers and chronic pain patients, and that the rich dataset from our study in DPN informs future development. While that DPN study missed the primary endpoint, we saw that patients with advanced DPN experienced a significant reduction in their pain with NYX-2925. NYX-783 also exhibited a very favorable safety and tolerability profile in healthy volunteers, allowing for our recent initiation of a Phase 2a study in patients with PTSD. And NYX-458 demonstrated highly compelling effects on cognitive impairment in a non-human primate model of Parkinson’s disease. Our strong balance sheet and the extensive learnings garnered over the past year enable us to continue advancing all of our innovative product candidates, which have the potential to positively impact the lives of patients suffering from difficult CNS disorders.”

Fourth Quarter 2018 and Recent Highlights

- **Initiated Phase 2a study of NYX-783:** In February 2019, Aptinyx initiated a Phase 2a clinical study of NYX-783 to characterize its safety, pharmacokinetics, and effects on symptoms in patients with post-traumatic stress disorder (PTSD). The study will enroll approximately 144 patients randomly assigned to receive either placebo or 50 mg of NYX-783 over the course of the eight-week study. Multiple efficacy endpoints will be evaluated in the study to assess the impact of NYX-783 across the spectrum of PTSD symptoms. The company expects to report data from this study in the first half of 2020.

- **Reported top-line results from Phase 2 study of NYX-2925 in painful DPN:**Aptinyx recently completed a Phase 2 clinical study of NYX-2925 in patients with painful diabetic peripheral neuropathy (DPN). While the primary endpoint in the study was not met, the data generated from the study address key considerations for future development, including the safety of NYX-2925 in a DPN patient population, the most active dose level across a 20-fold dose range, activity across multiple endpoints relevant to chronic pain, and key patient characteristics to inform inclusion and exclusion criteria for future studies.

  In January 2019, the company reported top-line results from the study. NYX-2925 was safe and well-tolerated with no serious adverse events reported; all adverse events were mild or moderate in nature and similar to those observed in the placebo group. In the total study population of 300 patients, NYX-2925 did not demonstrate statistically significant separation from placebo on the primary endpoint, change in patients’ average daily pain scores on the Numeric Rating Scale (NRS). However, NYX-2925 exhibited signals of analgesic activity, particularly in the 50 mg dose group. In the 50 mg dose group, an average pain reduction from baseline to week four of 1.61 points on the NRS was observed. This reflected an incremental pain reduction of 0.38 points compared to placebo. When evaluating only those patients that were not taking a concomitant analgesic medication, this separation from placebo improved to 0.58 points. The effect in the 50 mg dose group across several endpoints improved in a linear manner over the four weeks of treatment and did not appear to have reached a plateau by week four.

In March 2019, Aptinyx announced additional analyses from the study, which focused on a sub-group of 127 patients with advanced DPN—a DPN diagnosis for four years or longer—representing over 42% of the patients in the study These patients are particularly relevant to the mechanism of NYX-2925, which addresses the increasingly centralized pain these patients perceive when they experience chronic pain over a prolonged period of time. Consistent with the dose response observed in the total study population, the 50 mg dose group showed the greatest treatment benefits in this advanced DPN patient population. In the 50 mg dose group, an average pain reduction from baseline to week four of 1.93 points on the NRS was observed in advanced DPN patients. This reflected an incremental pain reduction of 1.21 points compared to placebo (p=0.004). Importantly, these effects were consistent across numerous endpoints in the study, including worst pain, pain on walking, sleep interference, and other pain and quality of life measures. Also consistent with the observations in the total study population, in advanced DPN patients the effects of NYX-2925 were even more pronounced in those patients not taking a concomitant analgesic medication—in the 50 mg group, the separation from placebo improved to 1.85 points in these patients.

Based on the detailed analysis of the study and the clear signals of analgesic activity that were observed in this mechanistically relevant patient sub-group, the company plans to initiate an additional clinical study of NYX-2925 for the treatment of painful DPN in the second half of 2019. Aptinyx plans to present further details from the analysis of the data generated in this study at the American Pain Society Scientific Meeting in April 2019.

- **Reported positive data from interim analysis of Phase 2 exploratory neuroimaging study of NYX-2925 in fibromyalgia:** In December 2018, Aptinyx reported positive results from an interim analysis of an exploratory neuroimaging study of NYX-2925 in patients with fibromyalgia. The design of the study was based on that of a post-approval study conducted with Lyrica® (pregabalin), an approved fibromyalgia treatment, which showed that changes in glutamate in certain brain regions are correlated with a reduction in clinical pain. In 11 patients, NYX-2925 was shown to induce statistically significant changes in these imaging biomarkers associated with pain processing and alleviation, including reductions in glutamatergic activity and connectivity in and between pre-specified brain regions. Reductions in patient-reported pain and other fibromyalgia symptoms were also observed. The study is ongoing, and the company expects to complete it and report data in the first half of 2019. Based on the results of the interim analysis, the company expects to initiate a larger Phase 2 study in the second half of 2019.

- **Reported positive data from exploratory clinical studies evaluating biomarkers of NMDAr-mediated pharmacodynamic activity of NYX-2925:** In November 2018, Aptinyx reported results from two exploratory clinical studies, conducted in healthy volunteers, in which NYX-2925 was shown to have rapid and persistent effects on NMDAr-mediated pathways in the brain, evaluated using EEG measures. In the studies, NYX-2925 was shown to have clear effects on synaptic plasticity and sleep architecture, validating the results observed in preclinical studies and providing the first clinical evidence of pharmacodynamic activity of a small-molecule product candidate from the Aptinyx discovery platform.

Expected Milestones

- Presenting detailed results of NYX-2925 Phase 2 study in painful DPN at APS Scientific Meeting in April 2019.
- Completion of, and reporting data from, NYX-2925 exploratory Phase 2 study in fibromyalgia in 1H 2019.
- Completion of, and reporting data from, Phase 1 study of NYX-458 in healthy volunteers in 1H 2019.
- Completion of, and reporting top-line data from, Phase 2a first-in-patient study of NYX-783 in PTSD in 1H 2020.

Fourth Quarter and Full Year 2018 Financial Results

Cash Position: Cash and cash equivalents were $150.6 million at December 31, 2018 compared to $92.1 million at December 31, 2017.

Collaboration and Grant Revenue: Revenue was $1.0 million and $6.6 million for the fourth quarter and full year 2018, respectively, as compared to $1.2 million and $5.0 million for the same periods in 2017. Aptinyx's revenue was primarily derived from its research collaboration agreement with Allergan and government grants. The increase was primarily driven by Allergan's payment of a $1.0 million fee in conjunction with its May 2018 exercise of its option to acquire exclusive rights to develop and commercialize AGN-241751, a product candidate from Aptinyx's novel chemistry platform, pursuant to the research collaboration agreement.

Research and Development (R&D) Expenses: R&D expenses were $10.9 million and $48.8 million for the fourth quarter and full year 2018, respectively, as compared to $6.7 million and $31.6 million for the same periods in 2017. The increase in R&D expenses was primarily driven by support of the company's Phase 2 clinical studies of NYX-2925 in painful DPN and fibromyalgia, Phase 1 clinical study costs related to ongoing development of NYX-458 for the treatment of Parkinson's disease cognitive impairment, ongoing development of NYX-783 for the treatment of PTSD and costs related to employee compensation due to increased headcount.

General and Administrative (G&A) Expenses: G&A expenses were $4.8 million and $12.7 million for the fourth quarter and full year 2018, respectively, as compared to $1.7 million and $5.6 million for the same periods in 2017. The increase in G&A expenses was primarily driven by increased costs related to employee compensation and professional fees to support ongoing business operations and compliance with obligations associated with being a publicly traded company.

Net Loss: For the fourth quarter of 2018, net loss was $14.1 million, or basic and diluted net loss per share attributable to common stockholders of $0.42, compared to a net loss of $7.2 million, or basic and diluted net loss per share attributable to common stockholders of $1.36, for the fourth quarter 2017. For the year ended December 31, 2018, net loss was $53.3 million, or basic and diluted net loss per share attributable to common stockholders of $2.64, compared to a net loss $32.1 million, or basic and diluted net loss per share attributable to common stockholders of $6.17, for the year ended December 31, 2017.

Conference Call

The Aptinyx management team will host a conference call and webcast today at 8:00am ET to provide a corporate update and financial results for the fourth quarter and full year 2018, followed by a Q&A session. To access the call please dial 1-866-930-5579 (domestic) or 1-409-216-0606 (international) and refer to conference ID 5973525. A live webcast of the call will be available on the Investors & Media section of Aptinyx's website at https://ir.aptinyx.com. The archived webcast will be available approximately two hours after the conference call and for 30 days thereafter.

About Aptinyx

Aptinyx Inc. is a clinical-stage biopharmaceutical company focused on the discovery, development, and commercialization of proprietary synthetic small molecules for the treatment of brain and nervous system disorders. Aptinyx has a platform for discovery of novel compounds that work through a unique mechanism to modulate – rather than block or over-activate – NMDA receptors and enhance synaptic plasticity, the foundation of neural cell communication. The company has three product candidates in clinical development in central nervous system indications, including chronic pain, post-traumatic stress disorder, and cognitive impairment associated with Parkinson's disease. Aptinyx is also advancing additional compounds from its proprietary discovery platform, which continues to generate a rich and diverse pipeline of small-molecule NMDA receptor modulators with the potential to treat an array of neurologic disorders. For more information, visit www.aptinyx.com.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding the company's business plans and objectives, including future plans or expectations for NYX-2925, therapeutic effects of the company's product candidates, expectations regarding the design, implementation, timing, and success of its current and planned clinical studies, the timing for the company's receipt of data from its clinical studies, expectations regarding its preclinical development activities, and expectations regarding its uses and sufficiency of capital. Risks that contribute to the uncertain nature of the forward-looking statements include: the success, cost, and timing of the company's product candidate development activities and planned clinical studies; the company's ability to execute on its strategy; positive results from a clinical study may not necessarily be predictive of the results of future or ongoing clinical studies; regulatory developments in the United States and foreign countries; the company's estimates regarding expenses, future revenue, and capital requirements, and other 2018 financial results; the company's ability to fund operations through 2020; as well as those risks and uncertainties set forth in the company's most recent quarterly report on Form 10-Q and subsequent filings with the Securities and Exchange Commission, including our upcoming Annual Report on Form 10-K for the year ended December 31, 2018. All forward-looking statements contained in this press release speak only as of the date on which they were made. Aptinyx undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

APTINYX INC.
CONDENSED BALANCE SHEETS
(in thousands)
(Unaudited)

Assets	**December 31, 2018**	**December 31, 2017**
Current Assets:		
Cash and cash equivalents	$ 150,637	$ 92,136
Restricted cash	252	—
Accounts receivable	578	937
Prepaid expenses and other current assets	1,784	1,960
Total current assets	153,251	95,033
Property and equipment and other long-term assets	2,363	2,289
Total assets	$ 155,614	$ 97,322
Liabilities and stockholders' equity (deficit)		
Current Liabilities:		
Accounts payable	$ 1,889	$ 1,537
Accrued expenses and other current liabilities	3,996	2,835
Total current liabilities	5,885	4,372
Other long-term liabilities	418	282
Total liabilities	6,303	4,654

Convertible preferred stock	—	132,386
Stockholders' equity (deficit)	149,311	(39,718)
Total liabilities and stockholders' equity (deficit)	$ 155,614	$ 97,322

APTINYX INC.
CONDENSED STATEMENTS OF OPERATIONS
(in thousands, except per share data)
(Unaudited)

	Three Months Ended December 31,		Year Ended December 31,	
	2018	**2017**	**2018**	**2017**
Collaboration and grant revenue	$ 1,039	$ 1,185	$ 6,574	$ 4,962
Operating expenses				
Research and development	10,928	6,714	48,788	31,644
General and administrative	4,822	1,733	12,674	5,551
Total operating expenses	15,750	8,447	61,462	37,195
Loss from operations	(14,711)	(7,262)	(54,888)	(32,233)
Other income	618	35	1,607	165
Net loss and comprehensive loss	$ (14,093)	$ (7,227)	$ (53,281)	$ (32,068)
Net loss per share - basic and diluted	$ (0.42)	$ (1.36)	$ (2.64)	$ (6.17)
Weighted average shares outstanding - basic and diluted	33,286	5,305	20,199	5,196

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