Aprea Therapeutics Reports First Quarter 2021 Financial Results and Provides Update on Business Operations

May 6, 2021

BOSTON, May 06, 2021 (GLOBE NEWSWIRE) -- Aprea Therapeutics, Inc. (Nasdaq: APRE), a biopharmaceutical company focused on developing and commercializing novel cancer therapeutics that reactivate the mutant tumor suppressor protein, p53, today reported financial results for the three months ended March 31, 2021 and provided a business update.

“During our recent R&D Day presentation, we reported an analysis of available data from its Phase 3 MDS trial. We identified an imbalance in dose modifications in the experimental arm which we believe negatively impacted efficacy, particularly the primary CR endpoint,” said Christian S. Schade, Chairman and Chief Executive Officer of Aprea. “We remain confident that eprenetapopt and our next-generation oral agent, APR-548, represent important potential therapeutic options for cancer patients and are encouraged by emerging data from our ongoing clinical trials. We look forward to sharing data updates from these clinical trials as well as our continued progress in expanding the opportunity for our therapies in new indications.”

Business Operations Update:

The Company is conducting, supporting, and planning multiple clinical trials of *eprenetapopt* (APR-246) and APR-548:

- **Phase 3 Frontline MDS Trial --** In June 2020, the Company completed full enrollment of 154 patients in a pivotal Phase 3 trial of eprenetapopt with azacitidine for frontline treatment of patients with *TP53* mutant MDS. The pivotal Phase 3 trial is supported by data from two Phase 1b/2 investigator-initiated trials, one in the U.S. and one in France, testing eprenetapopt with azacitidine as frontline treatment in *TP53* mutant MDS and AML patients. The data from the U.S. and French Phase 1b/2 trials were published in *The Journal of Clinical Oncology* in January 2021 and February 2021, respectively. In December 2020, the Company announced that its pivotal Phase 3 trial failed to meet its predefined primary endpoint of complete remission (CR) rate. Analysis of the primary endpoint at this data cut demonstrated a higher CR rate (53% more patients achieving a CR) in the experimental arm receiving eprenetapopt with azacitidine versus the control arm receiving azacitidine alone but did not reach statistical significance. Based on a thorough analysis of the current Phase 3 trial data and comparisons to the U.S. and French Phase 1b/2 trials the Company believes that despite similar types and frequency of adverse events observed in the Phase 3 experimental arm and the Phase 1b/2 trials, patients in the Phase 3 experimental arm experienced substantially more study treatment dose modifications compared to the experience in the U.S. and French Phase 1b/2 trials. The Company believes that dose modifications of eprenetapopt and azacitidine led to undertreatment in the Phase 3 experimental arm that negatively impacted efficacy, particularly the primary endpoint of CR rate. The Company continues to follow patients who remain on-study and anticipates discussing with FDA the Phase 3 data and future possible regulatory pathways in the second half of 2021.

- **Phase 2 MDS/AML Post-Transplant Trial** – The Company has completed enrollment of 33 patients in a single-arm, open-label Phase 2 clinical trial evaluating eprenetapopt with azacitidine as post-transplant maintenance therapy in *TP53* mutant MDS and AML patients who have received an allogeneic stem cell transplant. The primary endpoint of the trial is the rate of relapse-free survival (RFS) at 12 months, with a published benchmark of ~30%. An interim analysis in April 2021 showed a 62% rate of RFS at 12 months, with a median RFS of 462 days. An interim analysis of overall survival (OS) showed a 77% OS at 1 year, with a median number of events not yet reached. The Company anticipates initial results from the primary endpoint of RFS at 12 months in the second quarter of 2021.

- **Phase 1/2 AML Trial** – The Company is currently enrolling a Phase 1/2 clinical trial evaluating the safety, tolerability, and preliminary efficacy of eprenetapopt therapy in *TP53* mutant AML patients. The lead-in portion of the trial evaluated the tolerability of eprenetapopt with venetoclax, with or without azacitidine, and no dose-limiting toxicities were observed in 12 patients receiving either regimen. Based on these results, the Company has expanded the trial to treat 33 additional frontline *TP53* mutant AML patients with the combination of eprenetapopt, venetoclax and azacitidine. In the 19 frontline

AML patients who are evaluable for efficacy with the triplet regimen, the Company has observed a 63% CR + CRi composite response rate and a 31% CR rate. The Company anticipates completion of enrollment in the triplet regimen expansion cohort during the second quarter of 2021 and availability of preliminary response rate data from the cohort also in the second quarter of 2021.

- **Phase 1 NHL Trial** – The Company is currently enrolling a Phase 1 clinical trial in relapsed/refractory *TP53* mutant chronic lymphoid leukemia (CLL) assessing eprenetapopt with venetoclax and rituximab and eprenetapopt with ibrutinib in order to further assess eprenetapopt in hematological malignancies. The first patient was enrolled in the first quarter of 2021. The Company is also planning to evaluate the combination of eprenetapopt with venetoclax in relapsed/refractory mantle cell lymphoma.

- **Phase 1/2 Solid Tumor Trial** – The Company is currently enrolling a Phase 1/2 clinical trial in relapsed/refractory gastric, bladder and non-small cell lung cancers assessing eprenetapopt with anti-PD-1 therapy. The dose-escalation phase of the trial enrolled 6 patients with advanced solid tumors and no dose-limiting toxicities were observed. Based on these results, the Company is enrolling expansion cohorts for patients with advanced gastric, bladder and non-small cell lung cancers and has currently enrolled 15 patients across these expansion arms. A poster presentation for this trial has been accepted for presentation at the 2021 ASCO Annual Meeting (abstract TPS3161).

- **APR-548 Phase 1 Trial --** The Company's second product candidate, APR-548, is a next-generation p53 reactivator that is being developed in an oral dosage form. The Company has planned a Phase 1 dose-escalation clinical trial evaluating the safety, tolerability, and preliminary efficacy of APR-548 with azacitidine in frontline and relapsed/refractory MDS patients. The Company anticipates the first patient to be enrolled in the second quarter of 2021.

First Quarter Financial Results

- **Cash and cash equivalents:** As of March 31, 2021, the Company had $77.6 million of cash and cash equivalents compared to $89.0 million of cash and cash equivalents as of December 31, 2020. The Company expects cash burn for the full year 2021 to be between $30.0 million $35.0 million. The Company believes its cash and cash equivalents as of March 31, 2021 will be sufficient to meet its current projected operating requirements into 2023.
- **Research and Development (R&D) expenses:** R&D expenses were $6.8 million for the quarter ended March 31, 2021, compared to $9.1 million for the comparable period in 2020. The decrease in R&D expenses was primarily due to decreases in clinical trial costs for (i) our pivotal Phase 3 clinical trial of eprenetapopt with azacitidine for the frontline treatment of *TP53* mutant MDS which completed enrollment in Q2 2020 and (ii) our Phase 2 post-transplant MDS/AML clinical trial. These decreases were partially offset by increases in clinical trial costs for our Phase 1/2 clinical trial for the treatment of *TP53* mutant AML with venetoclax and azacitidine, our Phase 1/2 clinical trial in relapsed/refractory gastric, bladder and non-small cell lung cancers assessing eprenetapopt with anti-PD-1 therapy, and our Phase 1 clinical trial in relapsed/refractory *TP53* mutant chronic lymphoid leukemia (CLL) assessing eprenetapopt with venetoclax and rituximab, and eprenetapopt with ibrutinib.
- **General and Administrative (G&A) expenses:** G&A expenses were $3.4 million for the quarter ended March 31, 2021, compared to $2.8 million for the comparable period in 2020. The increase in G&A expenses was primarily due to increases in non-cash stock-based compensation and insurance expense.
- **Net loss:** Net loss was $9.7 million, or $0.46 per share for the quarter ended March 31, 2021, compared to a net loss of $9.4 million, or $0.45 per share for the quarter ended March 31, 2020. The Company had 21,186,827 shares of common stock outstanding as of March 31, 2021.

About Aprea Therapeutics, Inc.

Aprea Therapeutics, Inc. is a biopharmaceutical company headquartered in Boston, Massachusetts with research facilities in Stockholm, Sweden, focused on developing and commercializing novel cancer therapeutics that reactivate mutant tumor suppressor protein, p53. The Company's lead product candidate is eprenetapopt (APR-246), a small molecule in clinical development for hematologic malignancies and solid tumors. Eprenetapopt has received Breakthrough Therapy, Orphan Drug and Fast Track designations from the FDA for myelodysplastic syndromes (MDS), Orphan Drug and Fast Track designations from the FDA for acute myeloid leukemia (AML), and Orphan Drug designation from the European Commission for MDS, AML and ovarian cancer. APR-548, a next generation small molecule reactivator of mutant p53, is being developed for oral administration. For more information, please visit the company website at www.aprea.com.

The Company may use, and intends to use, its investor relations website at https://ir.aprea.com/ as a means of disclosing material nonpublic information and for complying with its disclosure obligations under Regulation FD.

About p53, eprenetapopt and APR-548

The p53 tumor suppressor gene is the most frequently mutated gene in human cancer, occurring in approximately 50% of all human tumors. These mutations are often associated with resistance to anti-cancer drugs and poor overall survival, representing a major unmet medical need in the treatment of cancer.

Eprenetapopt (APR-246) is a small molecule that has demonstrated reactivation of mutant and inactivated p53 protein – by restoring wild-type p53 conformation and function – thereby inducing programmed cell death in human cancer cells. Pre-clinical anti-tumor activity has been observed with eprenetapopt in a wide variety of solid and hematological cancers, including MDS, AML, and ovarian cancer, among others. Additionally, strong synergy has been seen with both traditional anti-cancer agents, such as chemotherapy, as well as newer mechanism-based anti-cancer drugs and immuno-oncology checkpoint inhibitors. In addition to pre-clinical testing, a Phase 1/2 clinical program with eprenetapopt has been completed, demonstrating a favorable safety profile and both biological and confirmed clinical responses in hematological malignancies and solid tumors with mutations in the *TP53* gene.

A pivotal Phase 3 clinical trial of eprenetapopt and azacitidine for frontline treatment of *TP53* mutant MDS has been completed and failed to meet the primary endpoint of complete remission. Additional clinical trials in hematologic malignancies and solid tumors are ongoing. Eprenetapopt has received Breakthrough Therapy, Orphan Drug and Fast Track designations from the FDA for MDS, Orphan Drug and Fast Track designations from the FDA for AML, and Orphan Drug designation from the European Medicines Agency for MDS, AML and ovarian cancer.

APR-548 is a next-generation small molecule p53 reactivator. APR-548 has demonstrated high oral bioavailability, enhanced potency relative to eprenetapopt in *TP53* mutant cancer cell lines and has demonstrated in vivo tumor growth inhibition following oral dosing of tumor-bearing mice. Enrollment in a Phase 1 clinical trial of APR-548 is anticipated to begin early in the second quarter of 2021.

Forward-Looking Statement

Certain information contained in this press release includes “forward-looking statements”, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, related to our study analyses, clinical trials, regulatory submissions, and projected cash position. We may, in some cases use terms such as “future,” “predicts,” “believes,” “potential,” “continue,” “anticipates,” “estimates,” “expects,” “plans,” “intends,” “targeting,” “confidence,” “may,” “could,” “might,” “likely,” “will,” “should” or other words that convey uncertainty of the future events or outcomes to identify these forward-looking statements. Our forward-looking statements are based on current beliefs and expectations of our management team that involve risks, potential changes in circumstances, assumptions, and uncertainties. Any or all of the forward-looking statements may turn out to be wrong or be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. These forward-looking statements are subject to risks and uncertainties including risks related to the success and timing of our clinical trials or other studies, risks associated with the coronavirus pandemic and the other risks set forth in our filings with the U.S. Securities and Exchange Commission. For all these reasons, actual results and developments could be materially different from those expressed in or implied by our forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which are made only as of the date of this press release. We undertake no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

Source: Aprea Therapeutics, Inc.

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Aprea Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)

	March 31, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 77,616,074	$ 89,017,686
Prepaid expenses and other current assets	2,467,443	3,399,019
Total current assets	80,083,517	92,416,705
Property and equipment, net	33,572	38,515
Right of use lease and other noncurrent assets	277,576	349,999
Total assets	$ 80,394,665	$ 92,805,219
Liabilities and Stockholders’ Equity		
Current liabilities:		
Accounts payable	$ 3,456,728	$ 4,503,619
Accrued expenses	7,532,473	10,571,237
Lease liability—current	225,537	256,309
Total current liabilities	11,214,738	15,331,165
Lease liability—noncurrent	33,763	78,847
Total liabilities	11,248,501	15,410,012
Commitments and contingencies		
Stockholders’ equity:		
Common stock, par value $0.001; 21,186,827 shares issued and outstanding at March 31, 2021 and December 31, 2020, respectively.	21,187	21,187

Additional paid-in capital	233,240,918	231,418,356
Accumulated other comprehensive loss	(10,440,111)	(10,037,261)
Accumulated deficit	(153,675,830)	(144,007,075)
Total stockholders' equity	69,146,164	77,395,207
Total liabilities and stockholders' equity	$ 80,394,665	$ 92,805,219

Aprea Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)

	Three Months Ended March 31,	
	2021	**2020**
Operating expenses:		
Research and development	$ 6,763,848	$ 9,096,122
General and administrative	3,425,833	2,776,468
Total operating expenses	10,189,681	11,872,590
Other income (expense):		
Interest (expense) income	(1,057)	224,442
Foreign currency (loss) gain	521,983	2,247,891
Total other income (expense)	520,926	2,472,333
Net loss	$ (9,668,755)	$ (9,400,257)
Other comprehensive income (loss):		
Foreign currency translation	(402,850)	(2,424,653)
Total comprehensive loss	(10,071,605)	(11,824,910)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.46)	$ (0.45)
Weighted-average common shares outstanding, basic and diluted	21,186,827	21,052,726

Source: Aprea Therapeutics