# Results From Combination of APR-246 with Immuno-Oncology Agents Presented at the 2019 American Association for Cancer Research (AACR) Annual Meeting in Atlanta

April 3, 2019
**April 3, 2019** —Studies support synergistic role of p53 stabilization by APR-246 in combination with immuno-oncology agents

BOSTON, MA. and STOCKHOLM, SWEDEN, April 3, 2019 – Aprea Therapeutics announced today the results of studies with APR-246 in combination with immune checkpoint blockade presented by researchers from Memorial Sloan Kettering Cancer Center at the 2019 AACR Annual Meeting in Atlanta. The studies collectively support a role for p53 activity in the tumor microenvironment and suggest that stabilization of the tumor suppressor protein, p53, by APR-246 can enhance anti-tumor immune response, particularly when combined with immuno-oncology agents.

The studies characterized changes in the tumor immune microenvironment in melanoma and colorectal cancer *in vivo* models when treated with APR-246 and immuno-oncology agents, either alone or in combination. APR-246 monotherapy treatment of melanoma tumors induced a pro-inflammatory tumor microenvironment. The analysis of tumor infiltrating immune cells demonstrated a pattern of gene expression suggesting that stabilization of p53 by APR-246 alters the immune tumor microenvironment and enables the immune system to target tumor cells more effectively. Anti-tumor activity was observed with APR-246 monotherapy; the combination treatment with APR-246 and anti-PD-1 enhanced the effects of PD-1 blockade in a T cell-dependent manner, as assessed by reduced tumor growth and improved survival. Also, the administration of APR-246 together with anti-PD-1 and anti-CTLA-4 dual immune checkpoint blockade significantly augmented anti-tumor control.

**Abstract:** 4843

**Poster Title:** TP53-stabilization with APR-246 enhances antitumor effects of immune checkpoint blockade in preclinical models.

**Session Title:** Targeted Therapies and Immunological/Tumor Microenvironment Effects

**Poster Presentation Date and Time:** Wednesday April 3, 2019, 8:00 am – 12:00 pm EDT

**About p53 and APR-246**

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.

APR-246 has been shown to reactivate mutant and inactivated p53 protein – by restoring wild-type p53 conformation and function – and thereby induce programmed cell death in human cancer cells. APR-246 has demonstrated pre-clinical anti-tumor activity in a wide variety of solid and hematological (blood) tumors, 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 I/II clinical program with APR-246 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.

**About Aprea Therapeutics**

Aprea Therapeutics is a Boston, Massachusetts and Stockholm, Sweden based biopharmaceutical company focused on the discovery and development of novel anticancer compounds that reactivate the tumor suppressor protein, p53. The Company's lead drug candidate is APR-246, a first-in-class small molecule, is in clinical development for myelodysplastic syndromes (MDS), acute myeloid leukemia (AML), as well as additional hematologic and solid tumor malignancies. Aprea has commenced a Phase 3 clinical study in p53 mutated MDS and completed enrollment in a Phase 1b/2 clinical trial in p53 mutated high-risk MDS and oligoblastic AML with APR-246 and azacitidine. Additional Phase 1b/2 studies for APR-246 in MDS and AML are also underway and in planning together with other approved anti-cancer agents. Aprea is also developing second generation p53 reactivators that have best-in-class potential. The Company recently completed a Series C financing raising a total of approximately US$62 million. The financing round was led by the Redmile Group, with participation by Rock Springs Capital and Janus Henderson Investors, and included existing investors: 5AM Ventures, Versant Ventures, HealthCap, Sectoral Asset Management and Karolinska Development AB (Nasdaq Stockholm: KDEV). For more information, please visit www.aprea.com.

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