Phase 2 MOONSONG Topline Results and Phase 3 MORNINGSKY Update

October 19, 2021

NASDAQ: AVIR
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**AT-527**

**AT-527 Addresses Key Challenges of COVID-19:**

*Oral Pill with MOA Designed to Inhibit Viral Replication*

- Oral direct-acting antivirals (DAAs) are complementary to vaccines, easy to access with a prescription, useful in all COVID-19 patients (vaccinated, unvaccinated)
- Targets viral RNA polymerase, **highly conserved** enzyme critical to viral replication
- Differentiated mechanism with **dual targets**, including chain termination (RdRp) and NiRAN inhibition, potentially creating a **high barrier to resistance** with broad antiviral coverage of coronaviruses and different variants of SARS-CoV-2

**Results to-date:**

1. **Reduction in viral load**
   - Demonstrated in Phase 2 interim results in **high-risk hospitalized** patients
   - Observed in Phase 2 MOONSONG results in **high-risk subgroup analysis**

2. **Target drug levels achieved in lungs** in healthy volunteers (BAL study)

3. Generally safe & well tolerated
   - **Non mutagenic and no effects on fertility and reproduction in nonclinical studies**

- Global collaboration with Roche with **multiple clinical trials advancing in parallel**, including global Phase 3 MORNINGSKY trial
Clinical Development Update

Phase 2 MOONSONG Topline Results and
Phase 3 MORNINGSKY Update
COVID-19 Continues to Evolve with New Variants and Viral Kinetics

- Almost 6,000 variants have been sequenced
- New variants associated with increased transmissibility, neutralization resistance and disease severity
- What we knew about COVID-19 at the beginning of 2021 has changed when it comes to:
  - Patient age / risk
  - Patient risk factors / comorbidities
  - Vaccination variability
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<tr>
<th>TRIAL</th>
<th>DESCRIPTION</th>
<th>TIMING</th>
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<tr>
<td><strong>Phase 1</strong></td>
<td>Healthy Volunteers</td>
<td>Positive results announced with first cohort; Ongoing studies</td>
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<tr>
<td><strong>Trial</strong></td>
<td><strong>DESCRIPTION</strong></td>
<td><strong>TIMING</strong></td>
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<td><strong>PK safety study, clinical pharmacology, standard drug-drug interaction trials &amp; dosing up to 1100 mg BID</strong></td>
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<td><strong>Phase 2</strong></td>
<td>Hospitalized Patients with Moderate COVID-19</td>
<td>Ongoing; 2Q 2021 Reported positive interim virology results</td>
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<td><strong>Safety, tolerability, and virology</strong></td>
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<td>Amending to 1,100 mg BID</td>
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<td><strong>Phase 2 MOONSONG</strong></td>
<td><strong>Outpatient Trial</strong></td>
<td>Ongoing; Q4 2021 reported topline virology results with observed viral load reduction in prespecified and exploratory subgroup analysis of high-risk patients in both cohorts</td>
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<td><strong>Antiviral activity of AT-527 compared with placebo in outpatients</strong></td>
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<td><strong>Phase 3 MORNINGSKY</strong></td>
<td><strong>Outpatient Global Trial</strong></td>
<td>2H 2022 data anticipated</td>
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<td><strong>Rapidly assessing potential modifications: patient population and primary endpoint</strong></td>
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<td><strong>Phase 3 Follow-on MEADOWSPRING</strong></td>
<td><strong>Evaluate AT-527 impact on long-term sequelae of COVID-19 patients previously enrolled in MORNINGSKY</strong></td>
<td><strong>Ongoing</strong></td>
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<td><strong>Long-Term Follow-on Study</strong></td>
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<td>2Q 2021 Initiated</td>
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<td><strong>Supplemental Phase 3 MARJORAM</strong></td>
<td><strong>Evaluate efficacy of AT-527 preventing infection in SARS-CoV-2 contacts of patients</strong></td>
<td>1H 2022 Anticipated initiation</td>
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*Country-by-country specific details to be finalized following consultation with applicable regulatory authorities.*
**Multiple Cohorts AT-527**

**Randomization**
- Placebo
- Double-blind oral administration: 5 days

**Topline Virology Results Q4 2021**

**Inclusion Criteria:**
- > 18 years old, SARS-CoV-2 positive 72 hours prior to randomization, mild or moderate COVID-19 patients in outpatient setting

**Countries:** Global Study

**Primary and Secondary Objective:**
- To evaluate antiviral activity of AT-527 compared with placebo
- Safety, PK, PK/PD

**Update:**
- Full analysis ongoing
- Cohort A (550 mg BID) & Cohort B (1,100 mg BID) completed
Phase 2 MOONSONG Key Baseline Characteristics & Trial Design

 Majority of Patients were Low Risk with Mild Disease

- Trial designed late 2020 / early 2021 prior to variant knowledge and their impact on viral kinetics
- Majority (approximately 2/3) of patients were without underlying health conditions
- Majority (approximately 2/3) of patients had mild symptoms
- Patients were on average 37 years old with BMI median <27
- In Cohort B (1,100 mg BID) 87% of patients in the treatment arm and 80% in the placebo group were seropositive
- Vaccinated patients (varying doses and vaccines types)
- 76% of patients enrolled in UK
- Pooled placebo likely included different COVID-19 variants and vaccination status
MOONSONG Phase 2 Topline Results Cohort A (550 mg BID)

Primary Endpoint Not Achieved in Overall Population; **Observed Trend in High-Risk Patients**

Reduction in viral load in high-risk patients with underlying health conditions; results align with Phase 2 interim results in high-risk hospitalized patients.

Primary Endpoint Cohort A

Primary Endpoint Prespecified Subgroup Analysis Cohort A with Underlying Health Conditions

**AT-527 550 mg BID Treatment Group**

**Day 5**
- \(-0.8 \log_{10}\) decrease vs. placebo

**Day 7**
- \(-0.5 \log_{10}\) decrease vs. placebo
Phase 2 MOONSONG Topline Results Cohort B vs Pooled Placebo A+B in Overall Population (1,100 mg BID)

- Cohort B designed with 3:1 randomization
- Protocol primary analysis for Cohort B designed to pool placebo to minimize patients randomized to placebo
- Operational delays resulted in enrollment delay of Cohort B vs Cohort A creating highly heterogeneous placebo group with potential different variant strains & varying vaccination levels confounding a comparison to actively treated patients
Phase 2 MOONSONG Topline Results Cohort B (1,100 mg BID)

Primary Endpoint Not Achieved in Overall Population; **Observed Trend in High-Risk Patients**

Reduction in viral load in high-risk patients with underlying health conditions confirmed in Cohort B (30 patients on AT-527, randomized to 10 patients on placebo); results align with Phase 2 interim results in high-risk hospitalized patients.

**Exploratory Endpoint Cohort B**

**Exploratory Endpoint Subgroup Analysis**
Cohort B with Underlying Health Conditions

AT-527 1,100 mg
Treatment Group

Day 5
-0.3 log_{10} decrease vs. placebo

Day 7
-0.5 log_{10} decrease vs. placebo
AT-527 Safety Profile

Consistent with previous studies, AT-527 was generally safe and well tolerated

- In the MOONSONG study, the proportion of patients experiencing any adverse event (AE) was 20% in the placebo group, 20% in the AT-527 550 mg BID group (Cohort A) and 27% in the AT-527 1,100 mg BID group (Cohort B). There were 3 non-drug related SAEs in each treatment group and all other AEs were grade 1 or 2.

- Gastrointestinal (GI)-related AEs were the most commonly reported AEs: 8% in the placebo group; 7% in the AT-527 550 mg BID group (Cohort A); 17% in the AT-527 1,100 mg BID group (Cohort B), with mild to moderate nausea/vomiting resulting in premature study drug discontinuation of 3% in the placebo group, 0% in the AT-527 550 mg BID group (Cohort A) and 17% in the AT-527 1,100 mg BID group (Cohort B).

- No clinically significant differences in laboratory abnormalities were observed in the treatment arms as compared to placebo.

- Atea has completed a comprehensive nonclinical program to characterize the safety profile of AT-527. Results from these nonclinical studies demonstrate that AT-527 is non-mutagenic and has no effects on fertility and reproduction.
Pharmacokinetics Data Exceed Effective Target in Healthy Volunteers at 1,100 mg BID

- Trough levels of AT-273 with AT-527 1,100 mg as 4x275 mg tablets exceeded the target of 150 ng/mL in most subjects (n=10) (mean±SD of 24-120h inclusive: 206±74.3 ng/mL)
Phase 2 MOONSONG Summary and Potential Considerations for Phase 3 MORNINGSKY Trial

Summary of Recent Results

• AT-527 550 mg BID and 1,100 mg BID doses are generally safe and well-tolerated

• MOONSONG trial did not meet primary endpoint in the overall patient population Cohorts A & B; observed trend in viral load reduction compared with placebo observed on Days 5 and 7 in prespecified and exploratory subgroup analysis of high-risk patients in both cohorts with underlying health conditions regardless of vaccination

MORNINGSKY Considerations

Based on these emerging data, potential modifications to the MORNINGSKY Phase 3 study may include:

• High-risk patients with underlying health conditions
• Potential change of primary endpoint