Phase 2 MOONSONG Topline Results and Phase 3 MORNINGSKY Update

October 19, 2021

NASDAQ: AVIR

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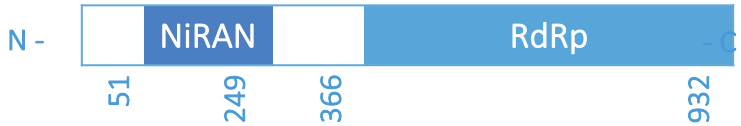
AT-527

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

Nsp12 Functional Domains
SARS-Cov-2



RdRp = RNA-dependent RNA polymerase
NiRAN = Nidovirus RdRp-Associated Nucleotidyltransferase

Roche

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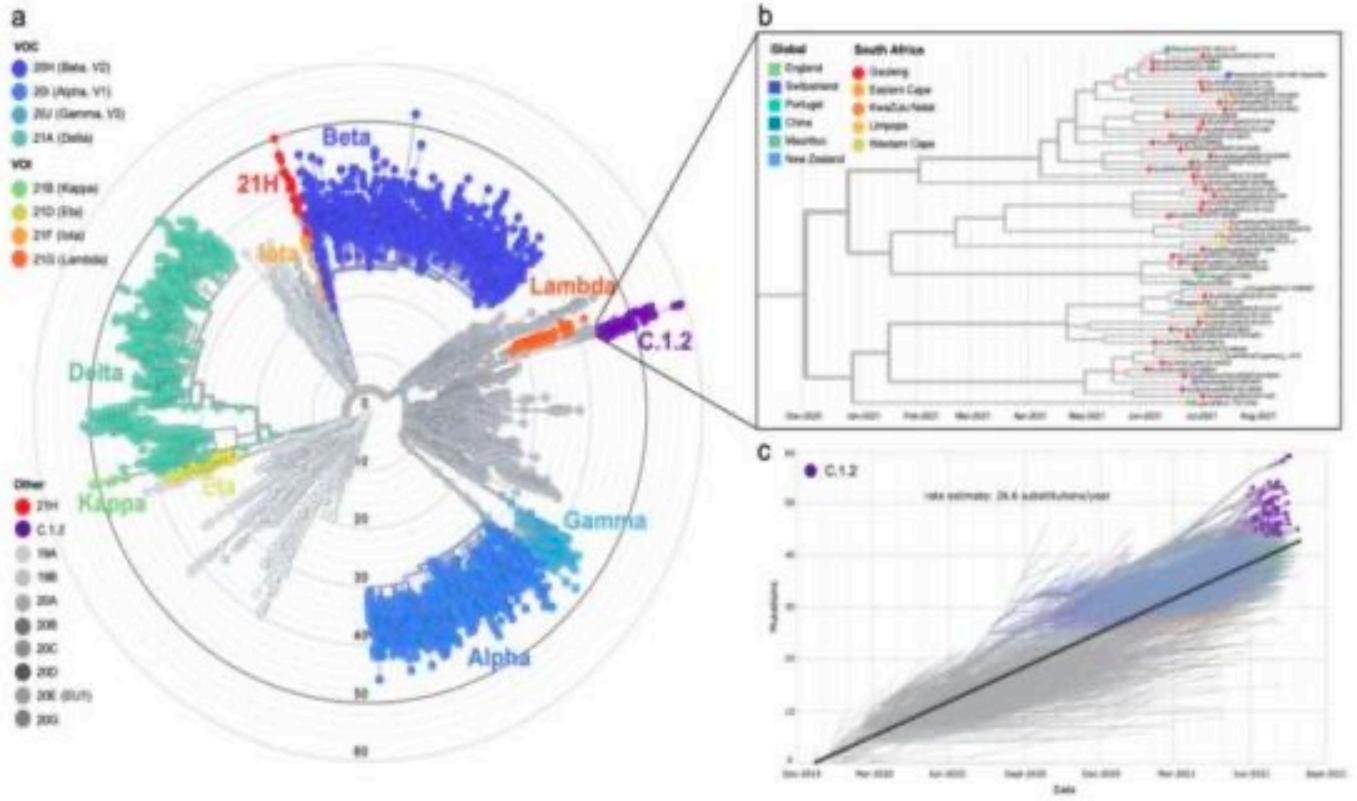
Clinical Development Update

Phase 2 MOONSONG Topline Results and Phase 3 MORNINGSKY Update

COVID-19 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

https://doi.org/10.1101/2021.08.20.21262342doi: medRxiv preprint

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COVID-19: Multiple Clinical Trials Active & Reporting Results in 2021 & 2022

TRIAL	DESCRIPTION	TIMING
Phase 1 Healthy Volunteers	PK safety study, clinical pharmacology, standard drug-drug interaction trials & dosing up to 1100 mg BID	Positive results announced with first cohort; Ongoing studies
Phase 2 Hospitalized Patients with Moderate COVID-19	Safety, tolerability, and virology	Ongoing; 2Q 2021 Reported positive interim virology results Amending to 1,100 mg BID
Phase 2 MOONSONG Outpatient Trial Mild or Moderate Patients +/- Risk Factors	Antiviral activity of AT-527 compared with placebo in outpatients Safety, PK, PK/PD	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
Phase 3 MORNINGSKY Outpatient Global Trial*	Rapidly assessing potential modifications: patient population and primary endpoint	2H 2022 data anticipated
Phase 3 Follow-on MEADOWSPRING Long-Term Follow-on Study*	Evaluate AT-527 impact on long-term sequelae of COVID-19 patients previously enrolled in MORNINGSKY	Ongoing 2Q 2021 Initiated
Supplemental Phase 3 MARJORAM Prophylaxis Study*	Evaluate efficacy of AT-527 preventing infection in SARS-CoV-2 contacts of patients	1H 2022 Anticipated initiation

*Country-by-country specific details to be finalized following consultation with applicable regulatory authorities.

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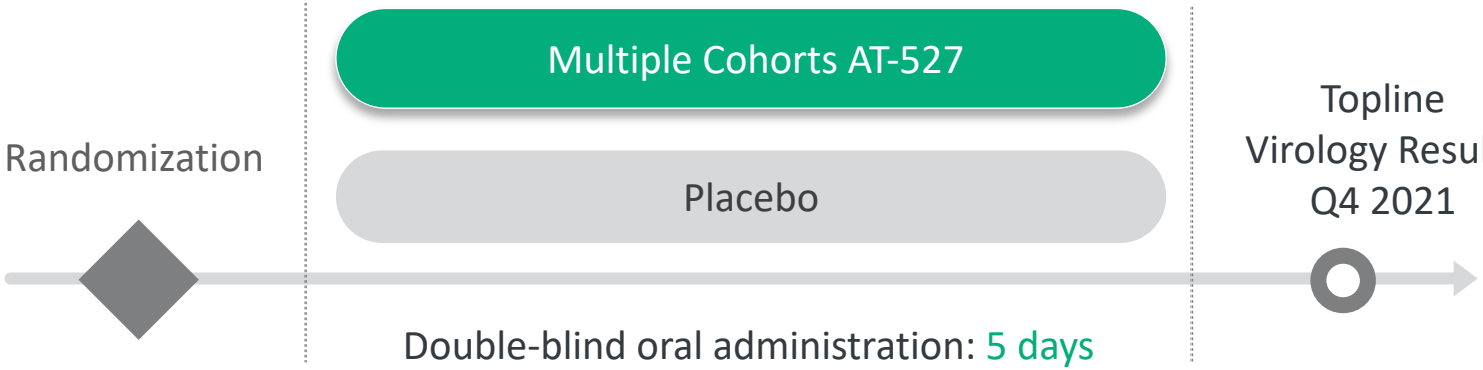
Phase 2 MOONSONG Study for COVID-19:

Outpatient Setting in Mild or Moderate Patients +/- Risk Factors

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

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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

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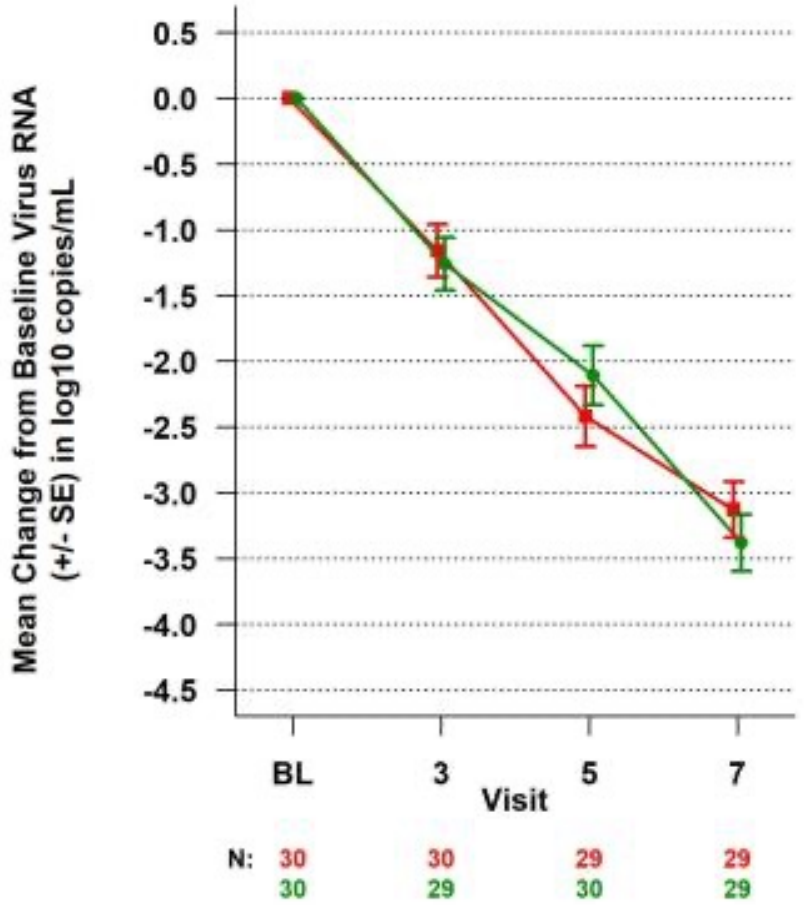
MOONSONG Phase 2 Topline Results Cohort A (550 mg BID)

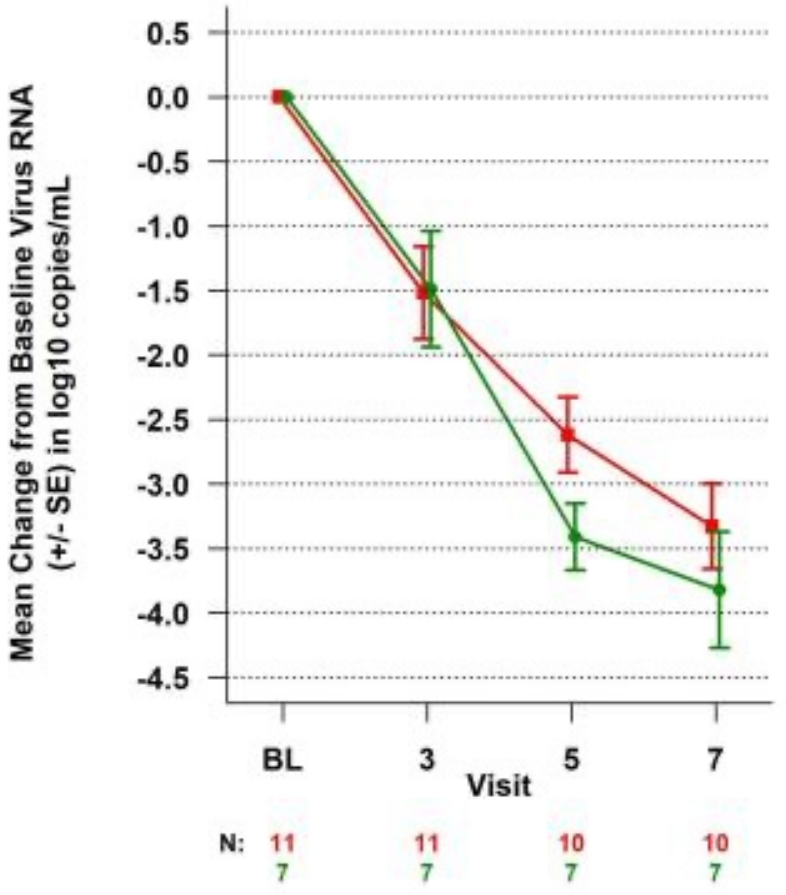
Primary Endpoint Not Achieved in Overall Population; ***Observed Trend in High-Risk Patients***

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

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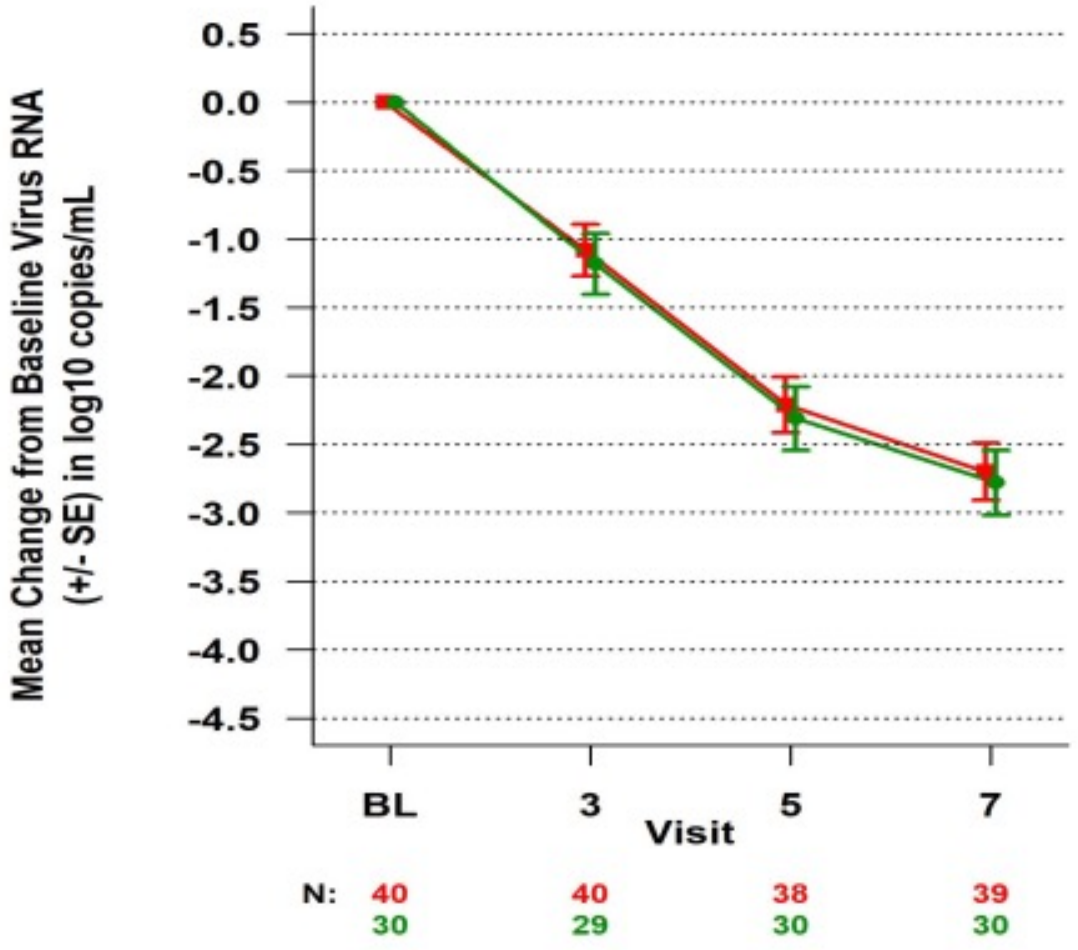
Phase 2 MOONSONG Topline Results Cohort B vs Pooled Placebo A+B in Overall Population (1,100 mg BID)

AT-527 1,100 mg

Pooled Placebo A+B

Primary Endpoint Cohort B vs Pooled Placebo A+B Overall population



- 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**

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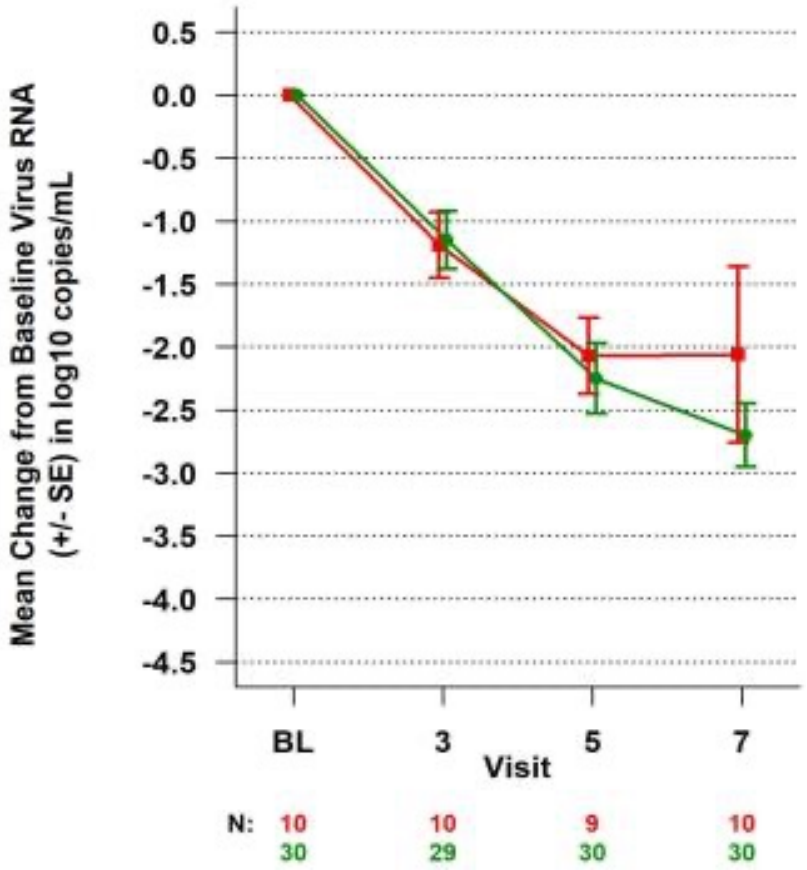
Phase 2 MOONSONG Topline Results Cohort B (1,100 mg BID)

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**

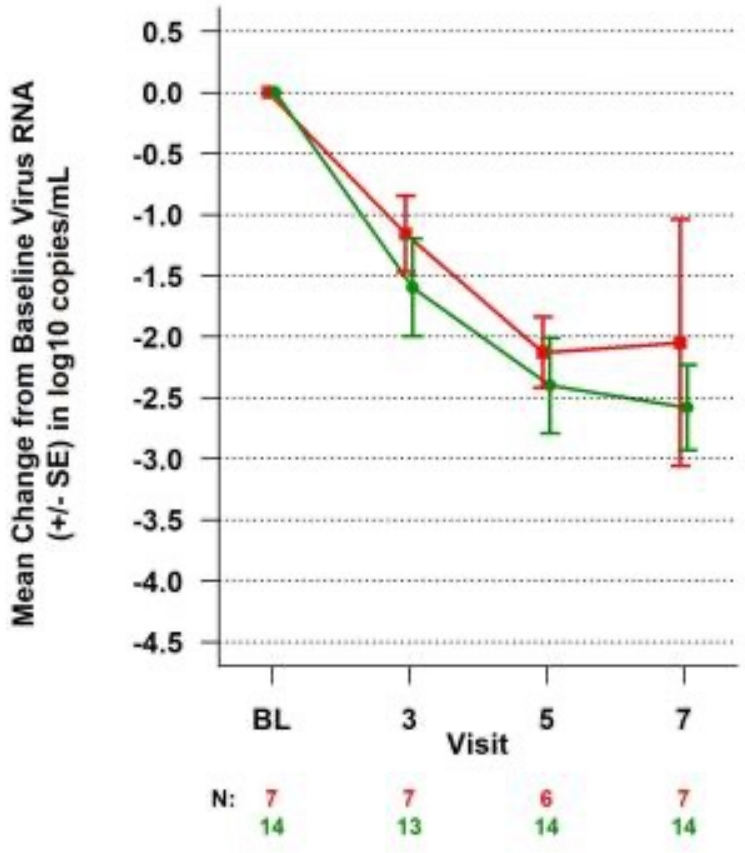
Exploratory Endpoint Cohort B



Exploratory Endpoint Subgroup Analysis Cohort B with Underlying Health Conditions

AT-527 1,100 mg

Cohort B Placebo



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

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.

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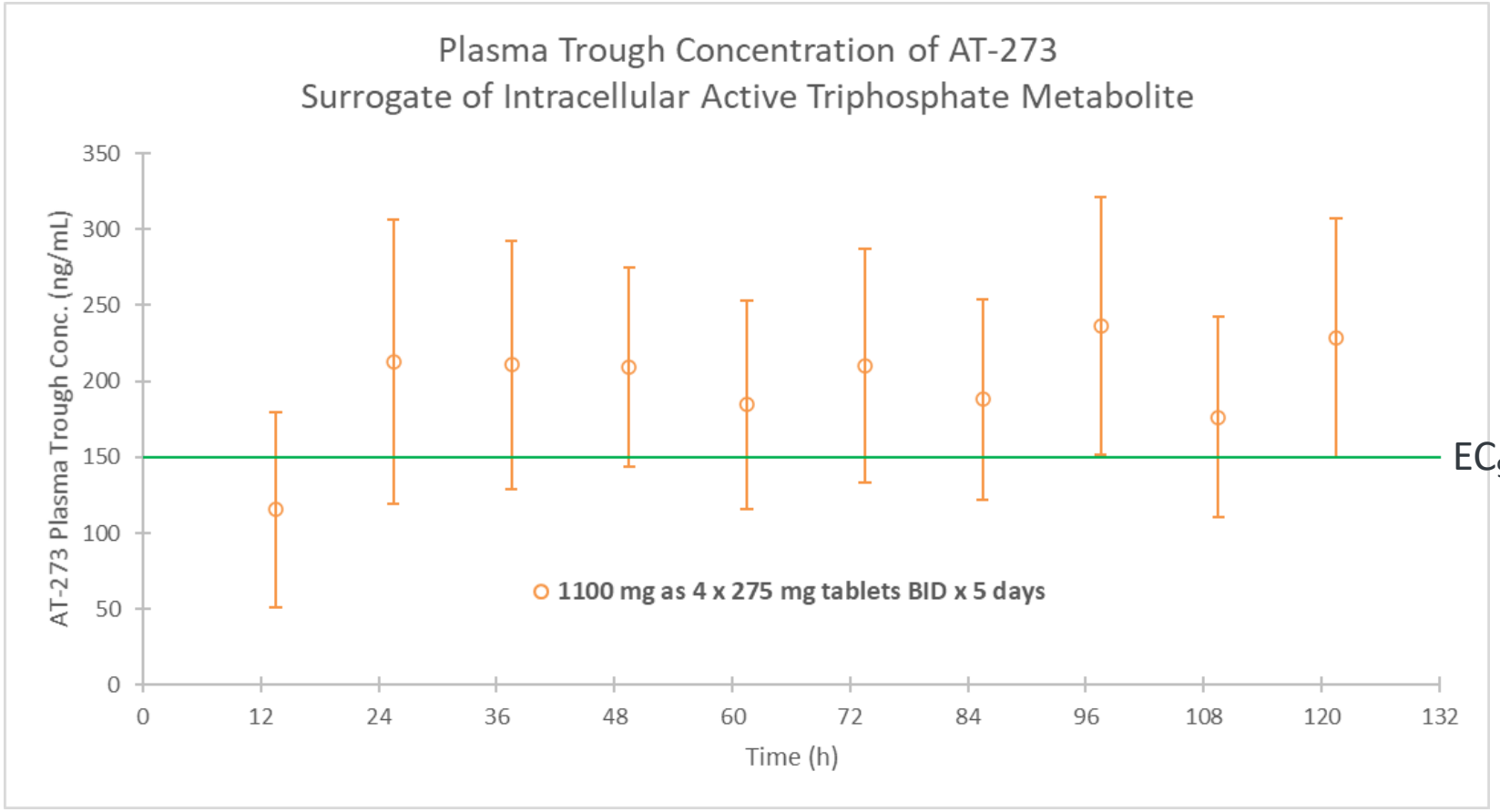
Pharmacokinetics Data Exceed Effective Target in Healthy Volunteers at 1,100 mg BID



- 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)

AT-527

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

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