Fourth Quarter and Full Year 2022 Financial Results and Business Update

February 28, 2023

NASDAQ: AVIR

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Industry Information

Market data and industry information used throughout this presentation are based on management's knowledge of the industry and the good faith estimates of management. We also relied, to the extent available, upon management's review of independent industry surveys and publications and other publicly available information prepared by a number of third-party sources. All of the market data and industry information used in this presentation involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Although we believe that these sources are reliable, we cannot guarantee the accuracy or completeness of this information, and we have not independently verified this information. While we believe the estimated market position, market opportunity and market size information included in this presentation are generally reliable, such information, which is derived in part from management's estimates and beliefs, is inherently uncertain and imprecise. No representations or warranties are made by the Company or any of its affiliates as to the accuracy of any such statements or projections. Projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described above. These and other factors could cause results to differ materially from those expressed in our estimates and beliefs and in the estimates prepared by independent parties.

Significant Achievements in 2022

COVID-19

- Bemnifosbuvir SUNRISE-3 Phase 3 trial informed by MORNINGSKY results
  - Innovative trial evaluating monotherapy (primary) and combination cohorts
  - Initiated Q4 2022 in US
- Advanced preclinical second-generation protease inhibitor program

HCV

- Completed preclinical work and ruzasvir manufacturing needed to initiate Phase 2 combination trial of bemnifosbuvir + ruzasvir in 2023

Dengue

- Conducted two proof-of-concept studies for AT-752
  - Evaluated impact of AT-752 on dengue virus infection

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Bemnifosbuvir

Phase 3 Program Update for COVID-19

- COVID-19 Update
- Bemnifosbuvir Global Phase 3 SUNRISE-3 Trial

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Bemnifosbuvir Addresses Key Limitations of Current COVID-19 Therapies

COVID-19 Market Dynamics Continue to Shift

Bemnifosbuvir Profile

- ✓ Nucleotide, oral direct-acting antiviral
- ✓ Targets viral RNA polymerase, highly conserved enzyme critical to viral replication & transcription
- ✓ Favorable safety and tolerability profile
- ✓ Due to low risk for drug-drug interaction[1], bemnifosbuvir may be co-administered with commonly prescribed drugs for high risk COVID-19 patients including:
  - Anticoagulants, statins and other cardiovascular medications, certain diabetes medications, immunosuppressants, and chemotherapy

Public Health Emergency Ending May 11, 2023

- New Emergency Use Authorizations (EUAs) are expected to continue if criteria are met[2]
- Positive tests are no longer required to receive antiviral treatment under EUA[3]
- US COVID-19 vaccines and treatments shifting to traditional payer market

(1) Conference on Retroviruses and Opportunistic Infections (CROI) February 2023 https://ir.ateapharma.com/news-and-events/publications

(2) https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/faqs-what-happens-euas-when-public-health-emergency-ends

(3) FDA: Frequently Asked Questions on the Emergency Use Authorization for Paxlovid for Treatment of COVID-19

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US Market Transitioning to Traditional Payer Channels

Market Expected to Remain a Long-Term Multi-Billion Dollar Opportunity

Projected Annual US COVID-19 Oral Antiviral Retail Demand[1]

Annual US Retail Rx
(~11M Sept-December 2022)

×

Cost of Treatment
($1K-2K)

=

>$10B
(in line with pharma projections)

Expanded Market Opportunities

Paxlovid™ Drug-Drug Interactions are a Concern

Annual US retail prescriptions (2021)[2] for commonly used drug classes where Paxlovid DDI is a concern

Cancer Therapies	Immunosuppressants & Immunomodulators	Oral Corticosteroids	HIV Antivirals	Anti Coagulants	Anti Arrhythmics	Calcium Blockers	Seizure Medications	Anti Psychotics
11M	12M	114M	10M	75M	10M	112M	164M	70M

- **Better safety and tolerability profile could lead to broader use**
- **Increased promotion & awareness**
- **No testing needed for prescription**

(1) Projections based on average 4 months (Sept, Oct, Nov, Dec 2022) IQVIA NPA TRx. (2) IQVIA NPA 2021 TRx.

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US Market Transitioning to Traditional Payer Channels

Prevention of Costs of Hospitalization Critical Value Driver for Oral Antivirals

Significant Economic Burden of COVID-19:
HOSPITALIZATION COSTS

~$22,000

CMS: average cost per hospitalization

~$13 Billion

Total expenses for Medicare[1]

~70%

of COVID-19 related hospitalized patients were Medicare

Medicare will now cover EUA medications

Payors Expected to Cover Oral Antivirals for Elderly and High-risk Individual (**SUNRISE-3 patient population**)

ICER[2] and ASPE[3]

Oral Antivirals Cost-Effective by Preventing Hospitalization

(1) CMS: Medicare COVID-19 Hospitalization Trends Report, January 1,2020 to December 21,2021 (2) ICER: Institute for Clinical and Economic Review (3) ASPE: Office of the Assistant Secretary of Planning and Evaluation a. Oral Treatments for Outpatient COVID-19: Effectiveness and Value by Molly Beinfeld, MPH et.al; J. Manag Care Spec. Pharm, 2022; 22(8): 908-09 b. Understanding Coverage Considerations for COVID-19 Vaccines and Treatment by Trinidad Beleche et. al, ASPE Report; August 2022

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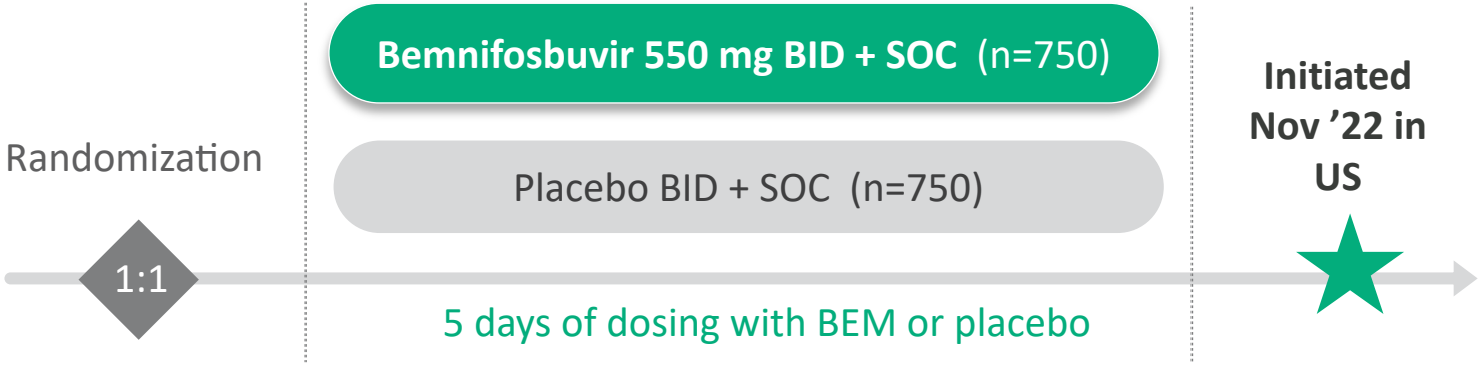
SUNRISE-3: Global Phase 3 Trial in High-Risk COVID-19 Outpatients

Innovative Phase 3 Trial Design with Global Footprint ~300 Clinical Sites

Inclusion Criteria: Enriched High-risk outpatients with mild or moderate COVID-19, regardless of vaccination status; symptom onset ≤ 5 days before randomization

Geography: US, Europe, Japan and ROW



Phase 3 Study Design:

- Randomized, double-blind, placebo-controlled
- Study drug (bemnifosbuvir or placebo) to be initiated at the same time as locally available standard of care (SOC)
- Two study populations derived from the type of SOC received:
  - "Supportive care population" – *monotherapy* (primary analysis)
  - "Combination antiviral population" – *combination therapy* (secondary analysis, local SOC includes treatment with other compatible antiviral drugs against COVID-19)
- ~4-6% hospitalization rate targeted
- Interim analysis to be conducted

Primary Endpoint:

- **All-cause hospitalization or death through Day 29 in supportive care population (n: ≥1,300 patients)**

Secondary Endpoints (assessed in each population):

- COVID-19 related hospitalizations and deaths
- Medically attended visits
- Symptom rebound / relapse
- Viral load rebound

HEPATITIS C

Program Update: Potential Best-in-Class Pan-Genotypic Regimen

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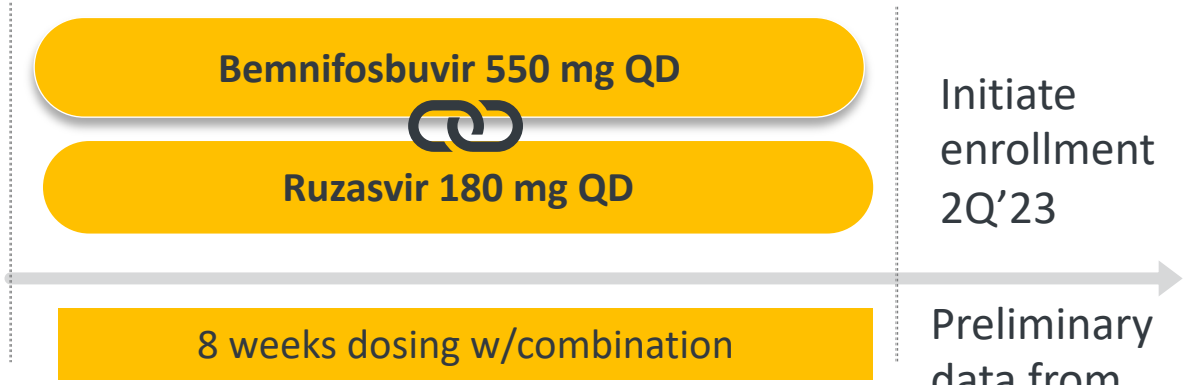
Phase 2 Open Label Study of Bemnifosbuvir + Ruzasvir in HCV Patients

Study Design: Open label combination

N=280: including a lead-in cohort of n=~60



Patient Population

- HCV-infected patients, including compensated cirrhosis
- Direct-acting antiviral naïve
- All genotypes

Primary Endpoints

- Sustained virologic response (SVR) at Week 12 post-treatment (SVR12)
- Safety

Other Endpoints

- Virologic failure
- SVR24
- Resistance

AT-752

Program Update:
Phase 2 Clinical Program for Dengue

AT-752 Program Conclusion

Business Decision to Deprioritize Dengue Program Due to Timelines and Costs

- Strategic decision to prioritize resources on COVID-19 and HCV
- AT-752 treatment led to faster resolution of fever, the major clinical sign of dengue
- DEFEND-2 highlights the need for better diagnostics to identify patients earlier in the course of disease to enable therapeutic interventions such as AT-752
- Phase 2 studies with a larger sample size would be required to account for the high variability in both treatment (>200 infected patients) and prophylaxis (>1,000 non-infected individuals)
- The long timelines (at least 3 years) and associated costs (several $100 million) for Phase 2 studies have led to the business decision to deprioritize the dengue program

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AT-752: Update on Proof-of-Concept Studies for Dengue

DEFEND-2: Global Phase 2 Study for Dengue Treatment

- Randomized, double-blind, placebo-controlled trial conducted in dengue endemic countries
- Inclusion criteria: adult patients, positive dengue test (NS1 Ag or PCR) and fever for no more than 48 hours
- Oral administration of AT-752 750 mg TID or placebo for 5 days
- Objectives: antiviral activity, safety, and PK
  - Primary endpoint:
    Change in dengue virus viral load from baseline
  - Exploratory:
    viremia, NS1 levels, fever
- Cohort 1: N=21 randomized in India, Thailand & Philippines (placebo n=7, AT-752 n=14)

Human Challenge Infection Model

- Enrolled healthy subjects between 18-55 years old
- Trial conducted exclusively in the United States
- Study designed to evaluate the effect of AT-752 in healthy volunteers challenged with an attenuated DENV-1 virus strain
- Oral administration of AT-752 750 mg TID or placebo for 14 days

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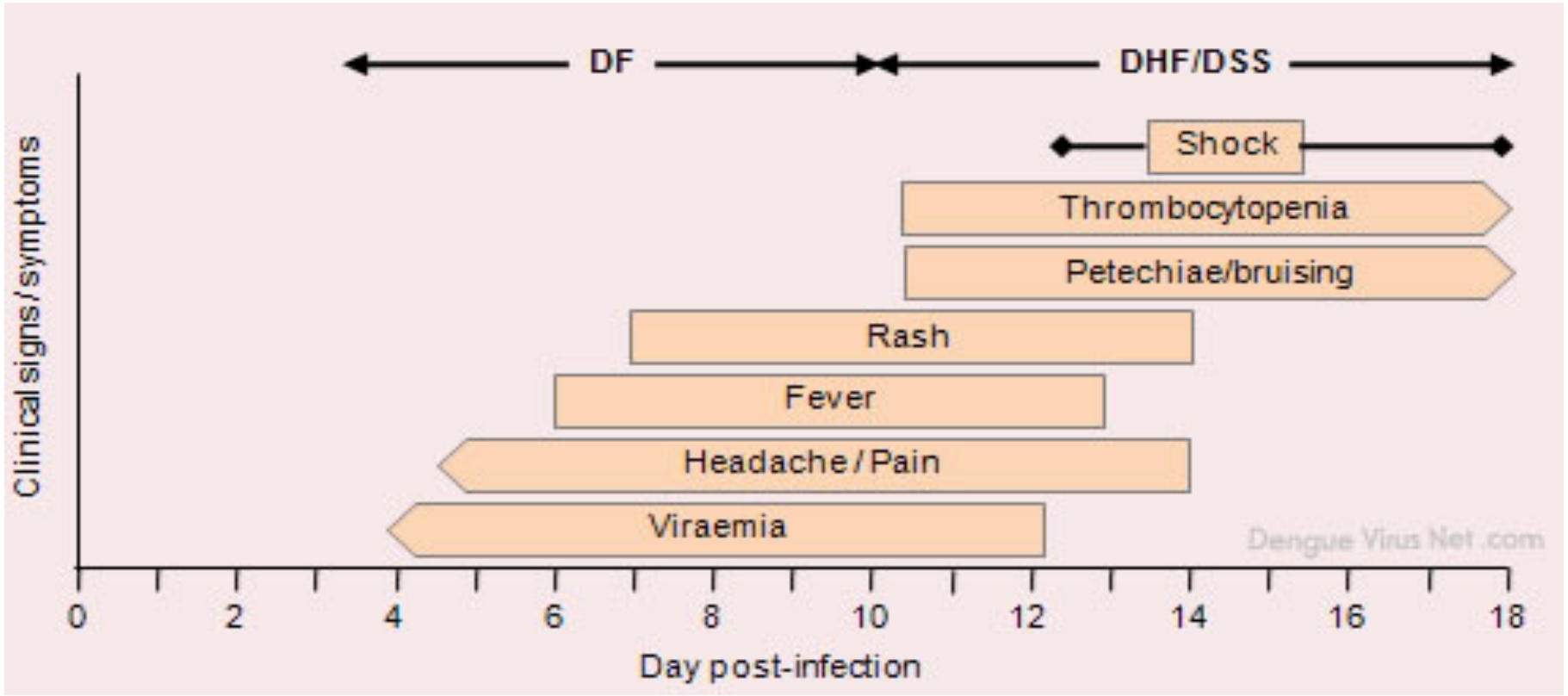
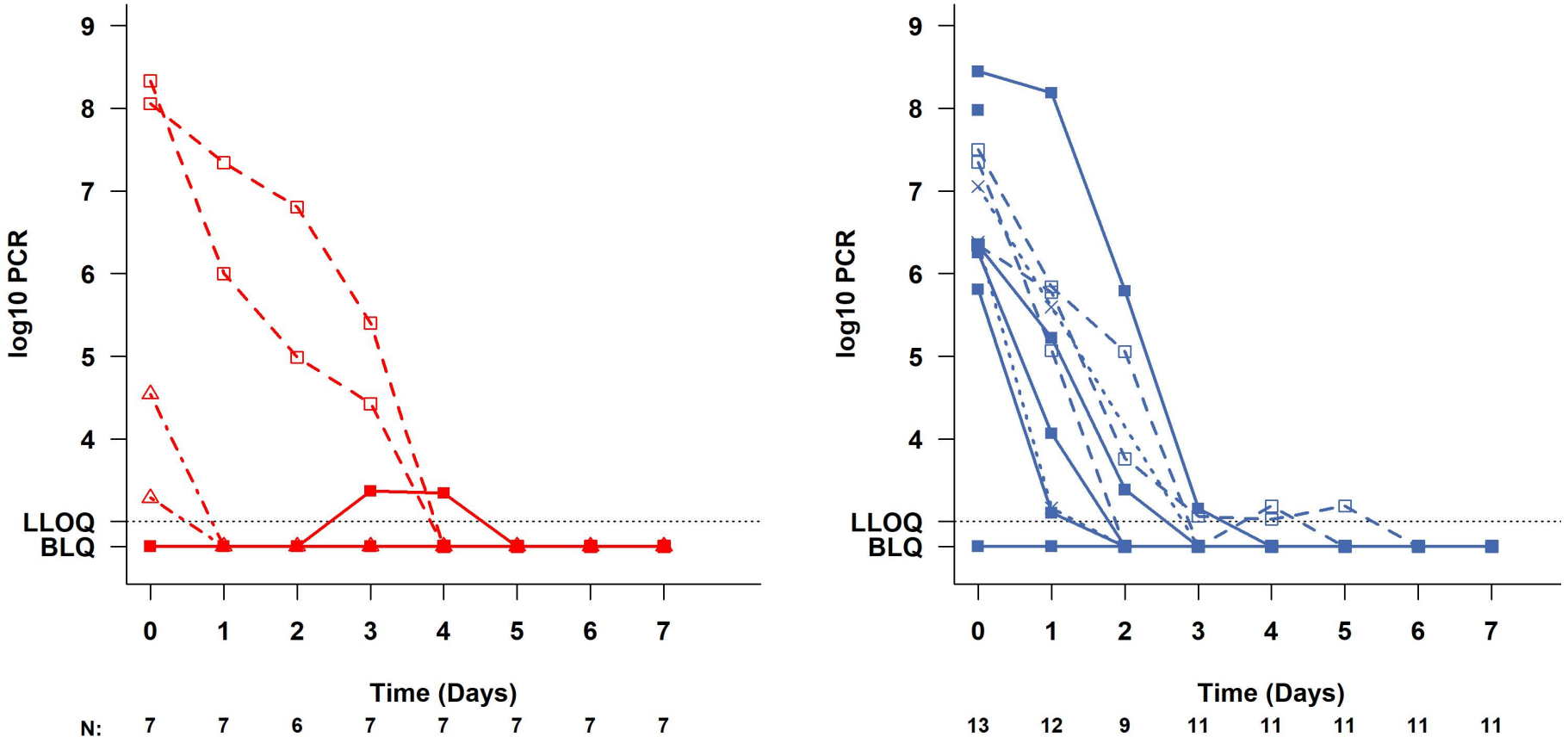
Course of Dengue Illness



Source: Denguevirusnet.com

DEFEND-2 Results: PCR Viral Load Over Time to Day 7

Primary endpoint

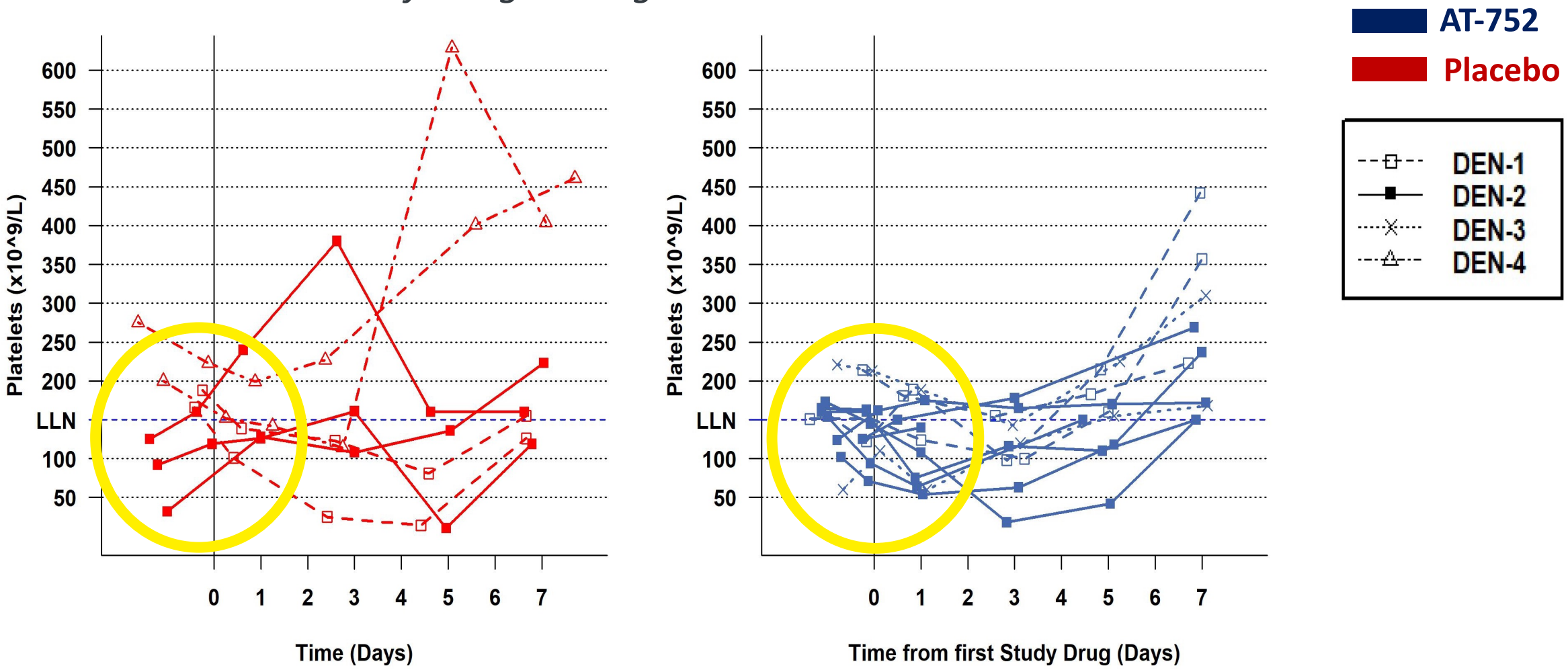


SEROTYPE	PLACEBO (N=7)	AT-752 (N=14)
DENV-1	2	3
DENV-2	3	8
DENV-3	0	2
DENV-4	2	0
No DENV detected	0	1

- Patients presented late in course of disease with high variability and low viremia levels at baseline particularly in placebo arm (3 patients with viremia below LLOQ)

DEFEND-2 Results: Platelets Over Time to Day 7

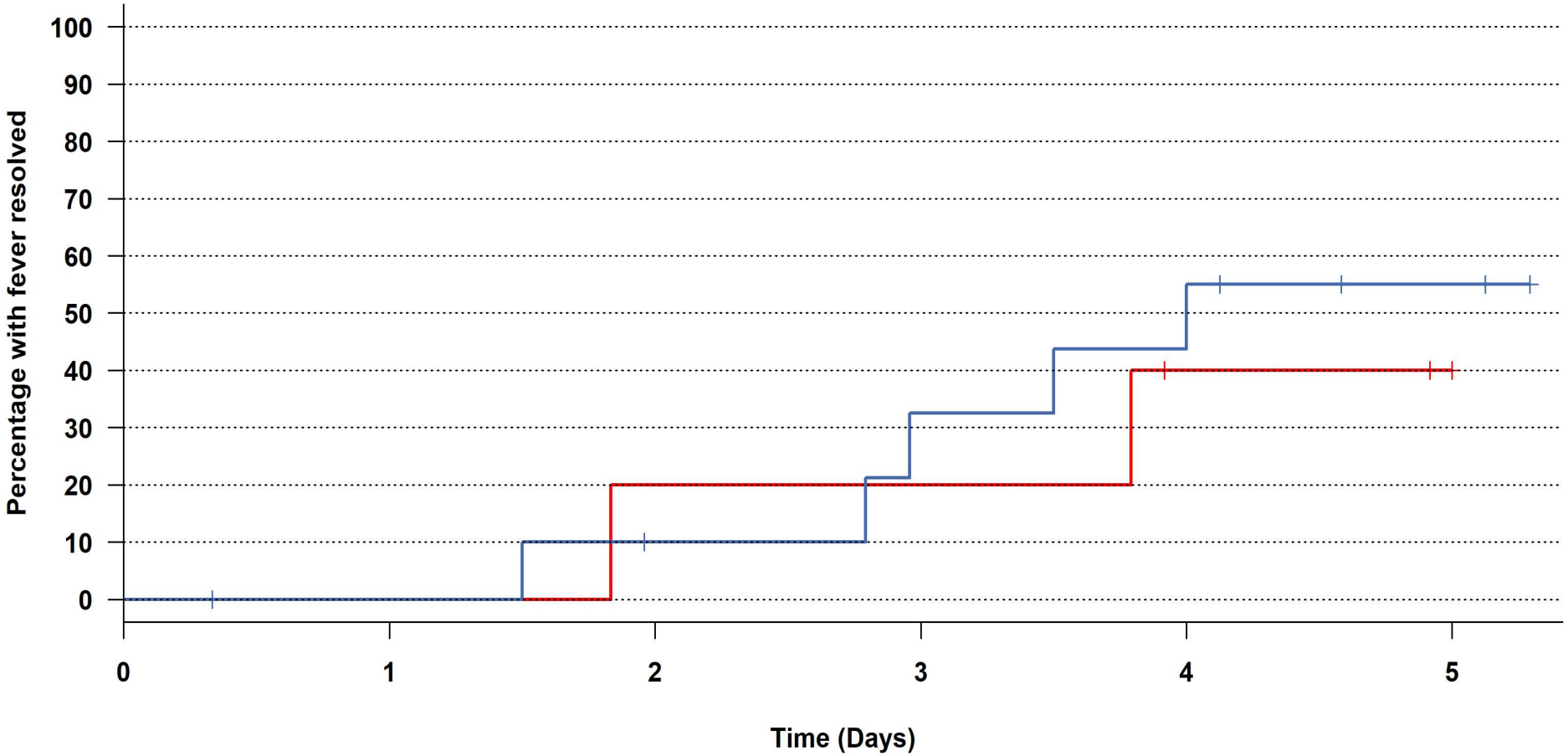
Platelets are a Biomarker of Dengue Progression



- At baseline, platelets were already low or below the Lower Limit of Normal (LLN) in majority of patients consistent with viremia data further demonstrating late presentation of disease

DEFEND-2 Results: Faster Resolution of Fever for AT-752 vs Placebo

Fever – the Major Clinical Sign of Dengue



AT-752

Placebo

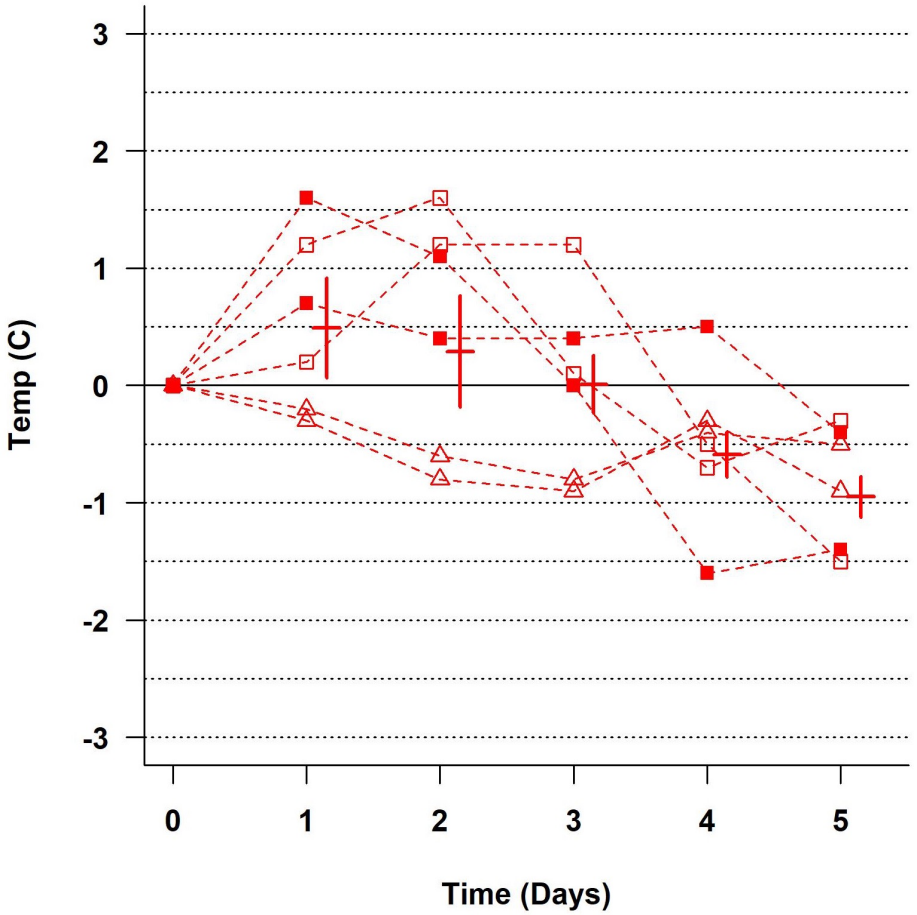
Median time to fever resolution:

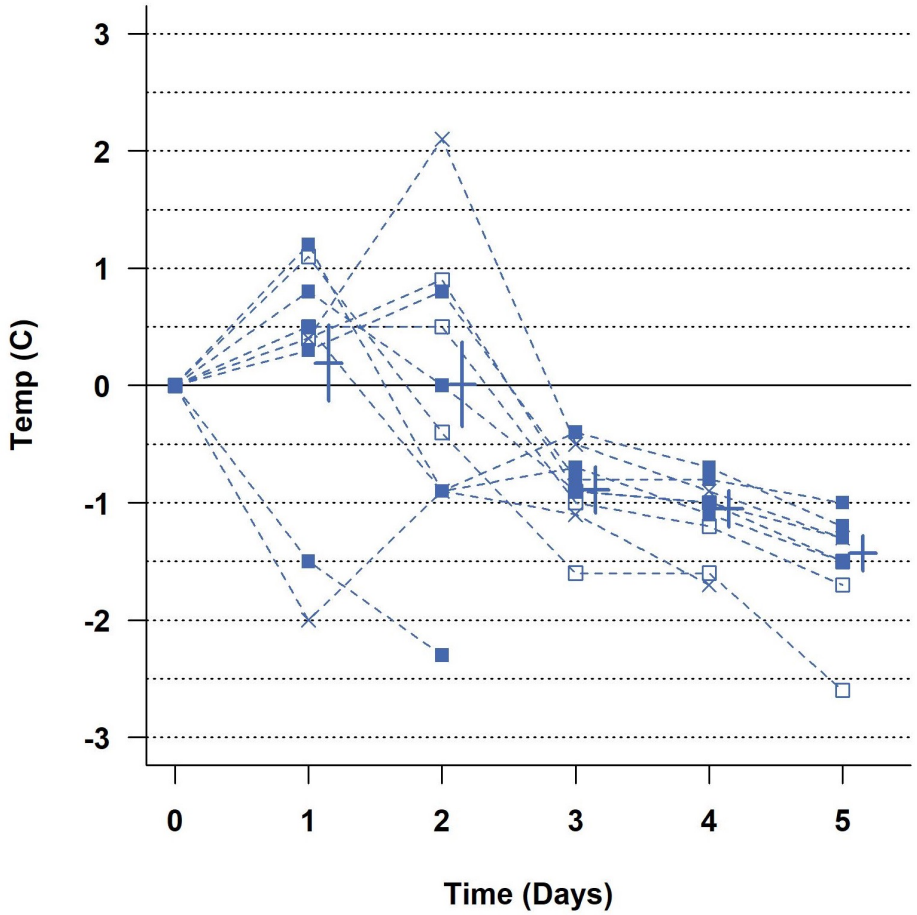
- AT-752: **4 days**
- Placebo: **> 5 days**

- Fever resolution defined as achievement of temperature ≤ 37° C for at least 24 hours and maintained to Day 5

DEFEND-2 Results: Body Temperature Changes Over Time in Patients with BL Temp >37˚C

Fever – The Major Clinical Sign of Dengue





AT-752

Placebo

DEN-1
DEN-2
DEN-3
DEN-4

Day 3:
AT-752 = **100%** with reduction from baseline

Placebo = **33%** with reduction from baseline

- Post-hoc analysis of body temperature changes over time shows change of 0.9 °C at Day 3 in favor of the AT-752 arm

AT-752 DEFEND-2 Phase 2 Safety Profile

- AT-752 dosed 750 mg TID demonstrated favorable safety and tolerability profile with no drug related serious adverse events (SAEs)
- Two non-drug related SAEs (hospitalizations due to thrombocytopenia and progression to severe dengue) occurred, 1/7 in placebo arm and 1/14 in AT-752 arm
- Other non-serious adverse events were mostly mild and moderate, self-limiting and occurred in comparable frequency in active and placebo arms

AT-752 Human Challenge Infection Model Summary

- Randomized, placebo controlled human challenge DENV-1 study evaluating AT-752 dosed 750 mg TID administered as prophylaxis
- The available results in 5 healthy volunteers were uninterpretable:
  - High variability observed in terms of viremia, antigenemia and the onset/severity of symptoms
  - Low drug exposures due to lack of dosing compliance
- A much larger sample size (n= >50) is needed to account for variability

Financial Summary

Financial Update Fourth Quarter and Full Year 2022

Condensed Consolidated Statement of Operations and Comprehensive Loss
(in thousands except share and per share amounts)

	Three Months Ended December 31,		Year Ended December 31,	
	2022 (unaudited)	2021 (unaudited)	2022 (unaudited)	2021
Collaboration revenue	$ —	$ 192,180	$ —	$ 351,367
Operating expenses				
Research and development	27,540	57,811	81,936	167,205
General and administrative	12,359	13,188	48,714	45,785
Total operating expenses	39,899	70,999	130,650	212,990
Income (loss) from operations	(39,899)	121,181	(130,650)	138,377
Interest income and other, net	5,591	51	11,151	213
Income (loss) before income taxes	(34,308)	121,232	(119,499)	138,590
Income tax benefit (expense)	(123)	(4,100)	3,590	(17,400)
Net income (loss)	$ (34,431)	$ 117,132	$ (115,909)	$ 121,190
Unrealized gain (loss) on available for sale investments	171	—	(684)	—
Comprehensive income (loss)	$ (34,260)	$ 117,132	$ (116,593)	$ 121,190
Net income (loss) per share attributable to common stockholders				
Basic	$ (0.41)	$ 1.41	$ (1.39)	$ 1.46
Diluted	$ (0.41)	$ 1.34	$ (1.39)	$ 1.37
Weighted-average common shares outstanding				
Basic	83,287,639	83,095,320	83,245,385	82,820,037
Diluted	83,287,639	87,092,688	83,245,385	88,249,243

Financial Update Fourth Quarter and Full Year 2022

Selected Condensed Consolidated Balance Sheet Data

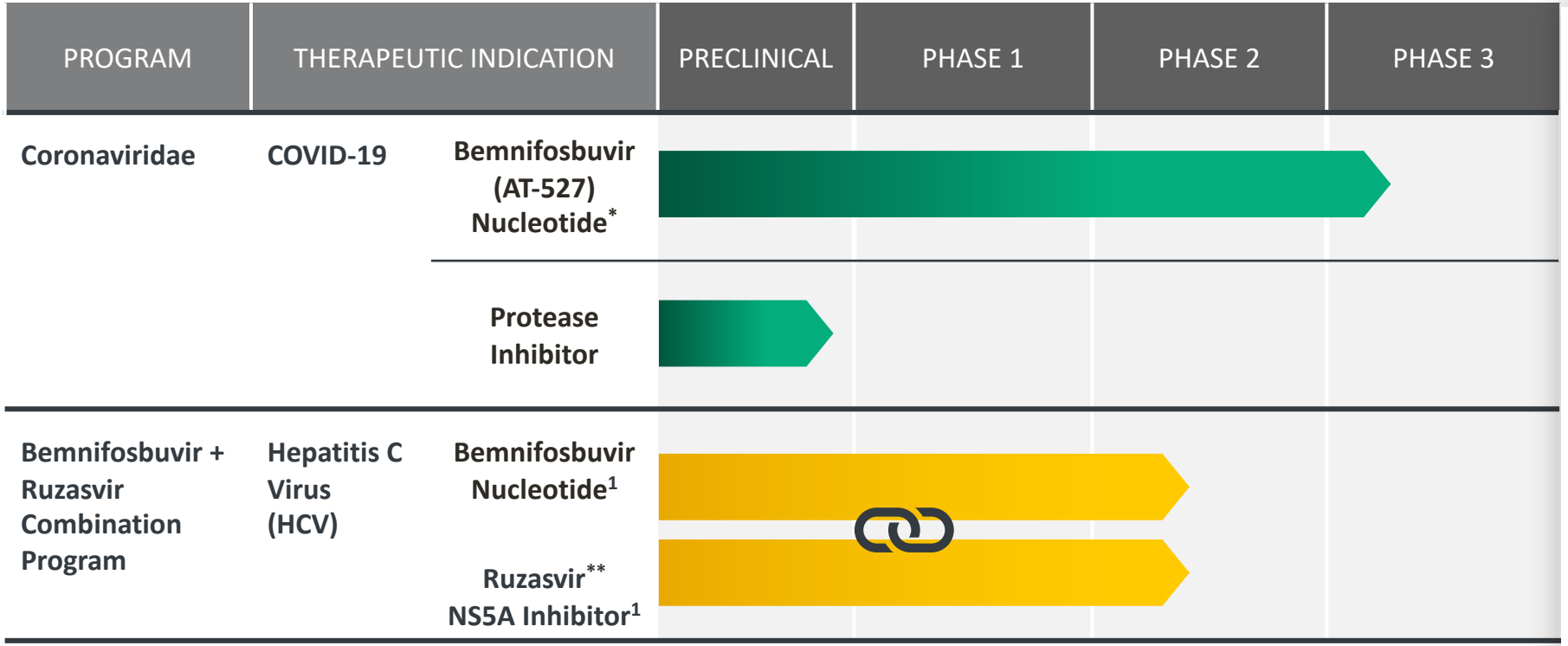
(in thousands)

	December 31, 2022 (unaudited)	December 31, 2021
Cash, cash equivalents and marketable securities	$ 646,709	$ 764,375
Working capital (1)	642,444	715,520
Total assets	666,708	772,892
Total liabilities	26,136	62,815
Total stockholders' equity	640,572	710,077

(1) Atea defines working capital as current assets less current liabilities. See Atea's consolidated financial statements in its Annual Report on Form 10-K for the year ended December 31, 2022, to be filed February 28, 2023, for further detail regarding its current assets and liabilities.

Closing Remarks

Advanced Antiviral Pipeline, Fully Funded Through Key Inflection Points and Beyond



Well Capitalized

$646.7 million
in cash, cash equivalents and marketable securities as of 12/31/22

Cash runway into 2026

*Bemnifosbuvir (generic name for AT-527) is a double prodrug nucleotide analog. ** Worldwide exclusive license for all uses from Merck.

1. Bemnifosbuvir and ruzasvir have each separately generated clinical results and will be developed as a combination for HCV.

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