Second Quarter 2023 Financial and Business Update

August 8, 2023

NASDAQ: AVIR

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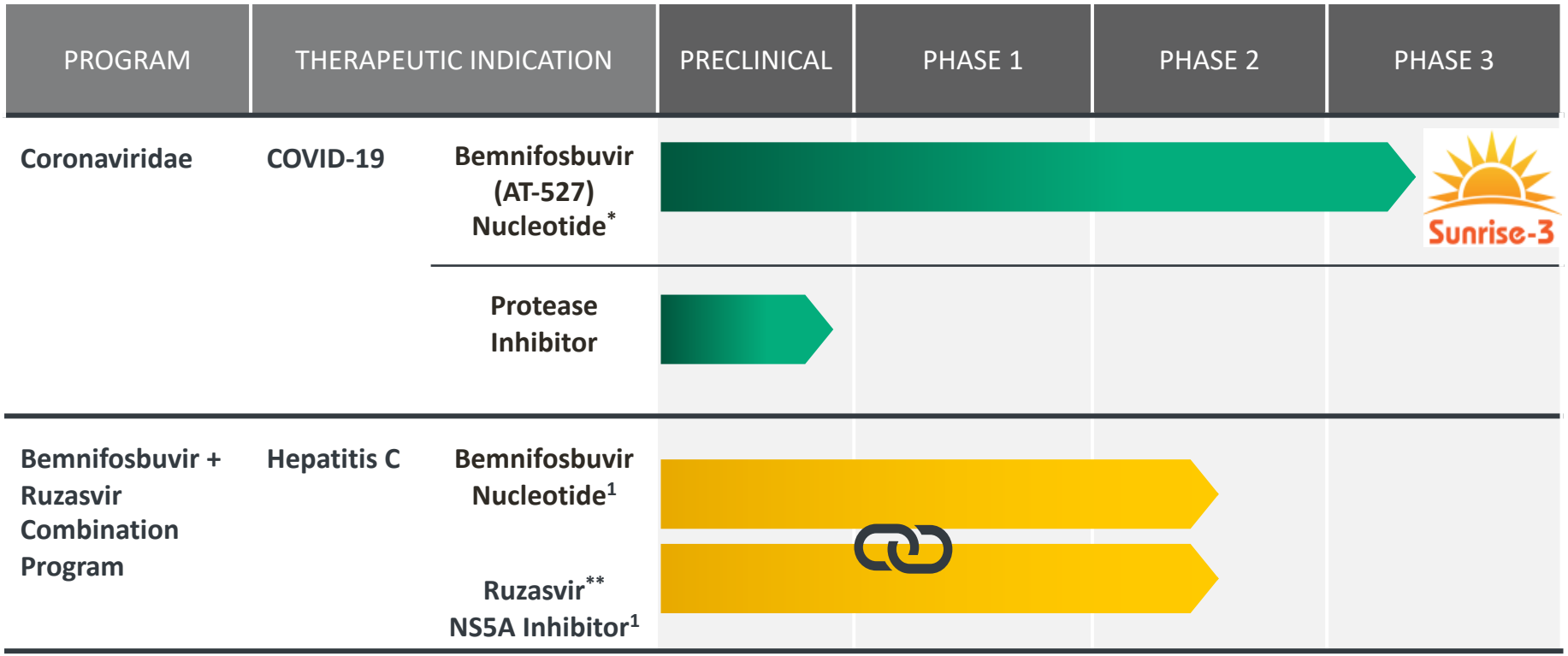
Industry Information

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.

Focused Antiviral Pipeline, Fully Funded Through Key Inflection Points

✓ Advancing innovative oral therapeutics that address the unmet medical needs of patients with serious viral diseases



- **SUNRISE-3:** 1st interim analysis expected YE'23-Q1'24
- Topline results mid-2024
- NDA submission target YE'24
- **Protease inhibitor:** program update YE'23
- **Ph 2 HCV trial:** lead-in cohort data expected Q4'23
- Ph 3 initiation target Q4'24
- Cash, cash equivalents & marketable securities: **$608.1M** Cash runway well 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 are being developed as a combination for HCV.

Bemnifosbuvir

Phase 3 Program for COVID-19

- Bemnifosbuvir Global Phase 3 SUNRISE-3 Trial and Protocol Amendment Update

Bemnifosbuvir – U.S. FDA Fast Track Designation for COVID-19

COVID-19 Strategy Focused on Highest Unmet Medical Need

COVID-19 UNMET MEDICAL NEED

- Waning immunity of vaccines / natural infection
- Potential mismatch of vaccine booster to circulating variants
- Failure to mount immune response to vaccines in some patients
- No effective monoclonal antibodies for outpatient use
- Key limitations with current oral antivirals include drug-drug interactions, safety concerns

Bemnifosbuvir's Compelling Profile

- ✓ Antiviral efficacy against all variants tested
- ✓ Low risk of drug-drug interactions
- ✓ No mutagenicity or embryo-fetal toxicity (preclinical)
- ✓ High barrier to resistance due to MOA

COVID-19 Continues to Evolve

New variants continue to emerge

Waves of infection continue to circulate globally

New oral antiviral treatment options are needed for vulnerable patients

Bemnifosbuvir Global Phase 3 SUNRISE-3 Update

Trial Update and Protocol Modifications

- **Expanded global footprint with increase in clinical sites and countries**
  - Targeting ~330 clinical sites, ~30 countries
- **SUNRISE-3 protocol amendment -- key highlights of modifications:**
  - Broadening eligibility criteria of high-risk outpatient population
  - Adjusting sample size for lower COVID-19 hospitalization and death rates
  - Including two interim analyses for data and safety monitoring board (DSMB) review (safety, futility)
  - Protocol amendment submitted to FDA and other regulatory agencies
  - No impact expected on timing for anticipated topline results mid-2024 and target New Drug Application (NDA) submission by year-end 2024

SUNRISE-3 Protocol Amendment Update

Modifications for High-Risk Eligibility Criteria and Current COVID-19 Environment

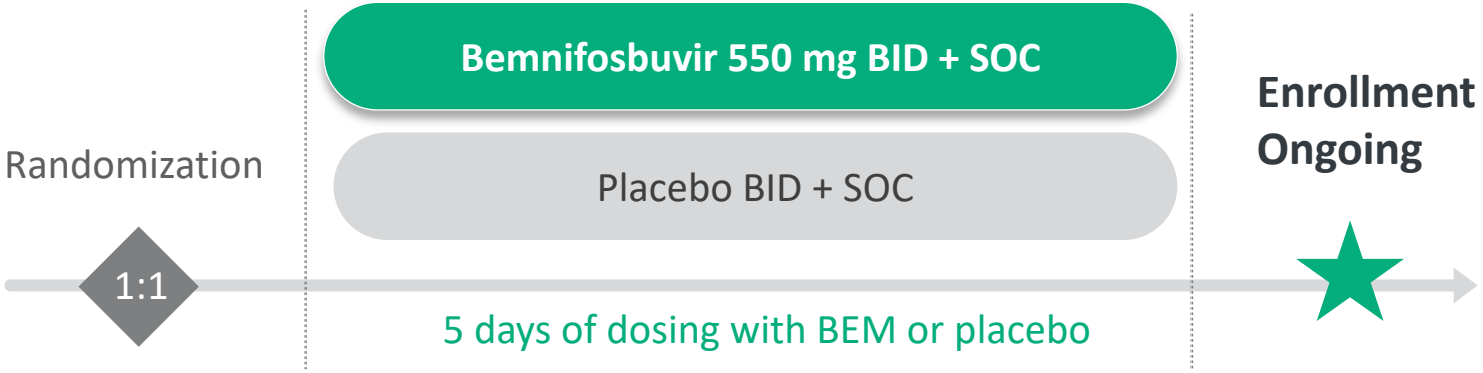
SUNRISE-3	Protocol Key Amendment Modifications
Broadening high-risk outpatient population	• High-risk outpatient eligibility modifications to age cut-offs: ➢ ≥70 (previously ≥80) ➢ ≥55 with one or more risk factors (previously ≥65) ➢ ≥50 with two or more risk factors (new) ➢ ≥18 with immunocompromised conditions (unchanged) • Expanded to patients with decreased renal function
Adjusting patient sample size for lower hospitalization and death rate of 2-3%	• Sample size increase to ~2,200 patients for static design (supportive care, monotherapy); prior adaptive design targeted ≥1,300 patients (supportive care, monotherapy) but allowed for sample size re-estimation and increase following an interim analysis • Powered to detect a clinically meaningful reduction in hospitalization or death versus placebo in supportive care, monotherapy arm
Operational update	• Two interim analyses for data and safety monitoring board (DSMB) review at ~650 and ~1,350 patients (both analyses supportive care, monotherapy) (safety, futility)

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

Bemnifosbuvir – U.S. Fast Track Designation for COVID-19

Inclusion Criteria: 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)
- Two interim analyses for DSMB review to be conducted (safety, futility)

Primary Endpoint:

- **All-cause hospitalization or death through Day 29 in supportive care population (n=~2,200 patients)**

Secondary Endpoints (assessed in each population):

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

HEPATITIS C

Potential Best-in-Class Pan-Genotypic Regimen

- HCV Program Overview
- Phase 2 Combination Trial

ATEA Pharmaceuticals

Addressing Undertreatment in HCV Infections

Bemnifosbuvir + Ruzasvir: Potential Best-in-Class Pan-genotypic Regimen

- **WHO:** 58M people globally have chronic HCV infection, ~1.5M new infections occur per year and ~300K people die every year from HCV-related liver diseases; more annual infections than cures
- **CDC:** Estimates >2M people in the US currently have HCV; new infections are ~4X as high as a decade ago
- **Reinfection rate**: ~20% in persons who inject drugs[1]

Bemnifosbuvir + Ruzasvir Compelling Profile

Convenient and short duration protease inhibitor-free treatment

Potential for first RBV-free therapy for decompensated disease

- ✓ Bemnifosbuvir is being developed as the most potent nucleotide inhibitor for HCV[2]
- ✓ Ruzasvir is a highly potent drug candidate[3]

1. Johannesson, Clinical Infectious Diseases, Volume 75, Issue 10, 15 November 2022, Pages 1732–1739 2. Good SS et al (2020) Preclinical evaluation of AT-527, a novel guanosine nucleotide prodrug with potent, pan-genotypic activityagainst hepatitis C virus. PLoS ONE 15(1):e0227104 https://doi.org/10.1371/journal.pone.0227104 3..Journal of Viral Hepatitis, 2019, September:26 (9); 1127-1138.

ATEA Pharmaceuticals

Potential Best-in-Class Pan-genotypic Regimen

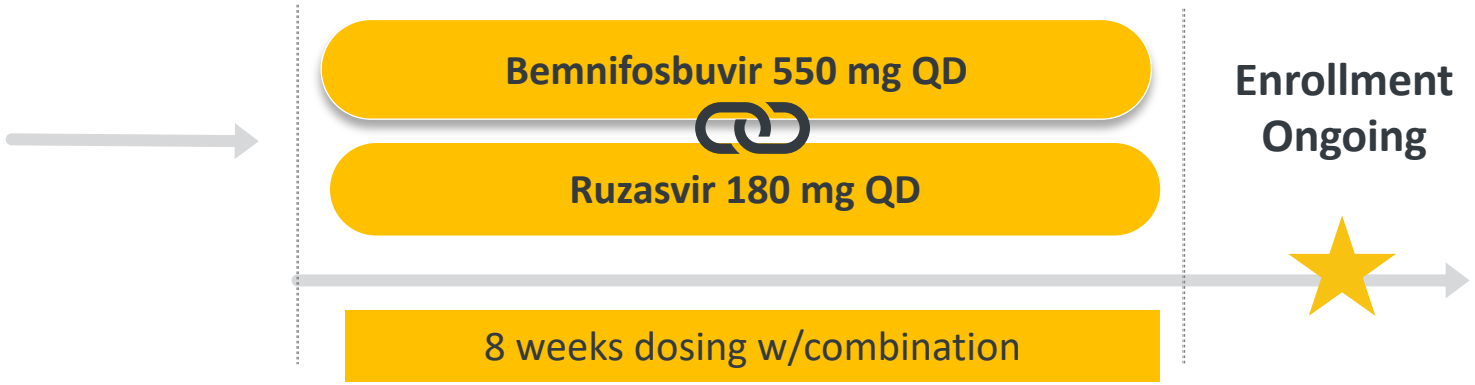
- **Bemnifosbuvir is at least 10X more potent than sofosbuvir *in vitro***; retained full potency against all HCV GT-1a and GT-3a NS5A resistance associated variants (RAVs) tested
- **Ruzasvir has a more favorable *in vitro* potency** profile against most HCV GT-1a and GT-3a RAVs as compared to velpatasvir
- **Combination of bemnifosbuvir + ruzasvir expected to have highly compelling profile:**
  - Targeting 8 weeks of therapy with the potential for a shorter duration
  - Pan-genotypic antiviral potency
  - Protease-inhibitor free
  - No food effect
  - Clinical safety and efficacy of each agent previously demonstrated
  - Low potential for drug-drug interaction of combination with commonly prescribed drugs, including concomitant medications typically used in medication-assisted treatment for opioid use disorders

ATEA Pharmaceuticals

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

Financial Summary

Financial Update Second Quarter 2023

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Operating expenses				
Research and development	$ 22,063	$ 19,858	$ 51,017	$ 49,491
General and administrative	13,172	12,437	25,787	24,979
Total operating expenses	35,235	32,295	76,804	74,470
Income (loss) from operations	(35,235)	(32,295)	(76,804)	(74,470)
Interest income and other, net	7,303	1,080	13,602	1,178
Income (loss) before income taxes	(27,932)	(31,215)	(63,202)	(73,292)
Income tax expense	(251)	(120)	(448)	(120)
Net loss	$ (28,183)	$ (31,335)	$ (63,650)	$ (73,412)
Other comprehensive income:				
Unrealized (loss) gain on available-for- sale investments	(3)	---	374	---
Comprehensive loss	$ (28,186)	$ (31,335)	$ (63,276)	$ (73,412)
Net loss per share – basic and diluted	$ (0.34)	$ (0.38)	$ (0.76)	$ (0.88)
Weighted-average common shares used in computing net loss per share – basic and diluted	83,399,377	83,257,591	83,361,398	83,217,223

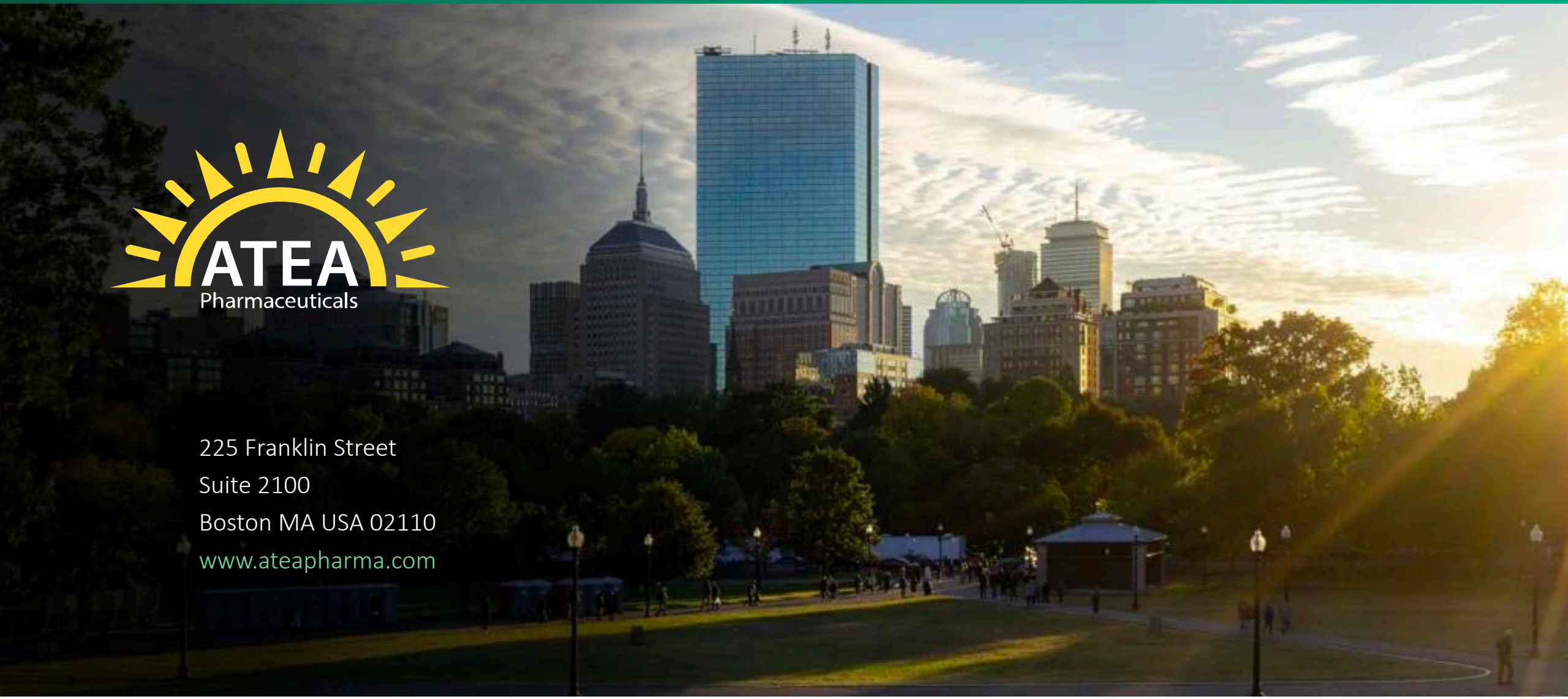
Financial Update Second Quarter 2023

Selected Condensed Consolidated Balance Sheet Data
(in thousands)
(unaudited)

	June 30, 2023	December 31, 2022
Cash, cash equivalents and marketable securities	$ 608,062	$ 646,709
Working capital(1)	604,667	642,444
Total assets	626,028	666,708
Total liabilities	23,679	26,136
Total stockholders' equity	602,349	640,572

(1) The Company defines working capital as current assets less current liabilities. See the Company's condensed consolidated financial statements in its Quarterly Report on Form 10-Q for the three months ended June 30, 2023 for further detail regarding its current assets and liabilities.

Closing Remarks



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