ATEA Pharmaceuticals

Jefferies Healthcare Conference

June 8, 2023

NASDAQ: AVIR

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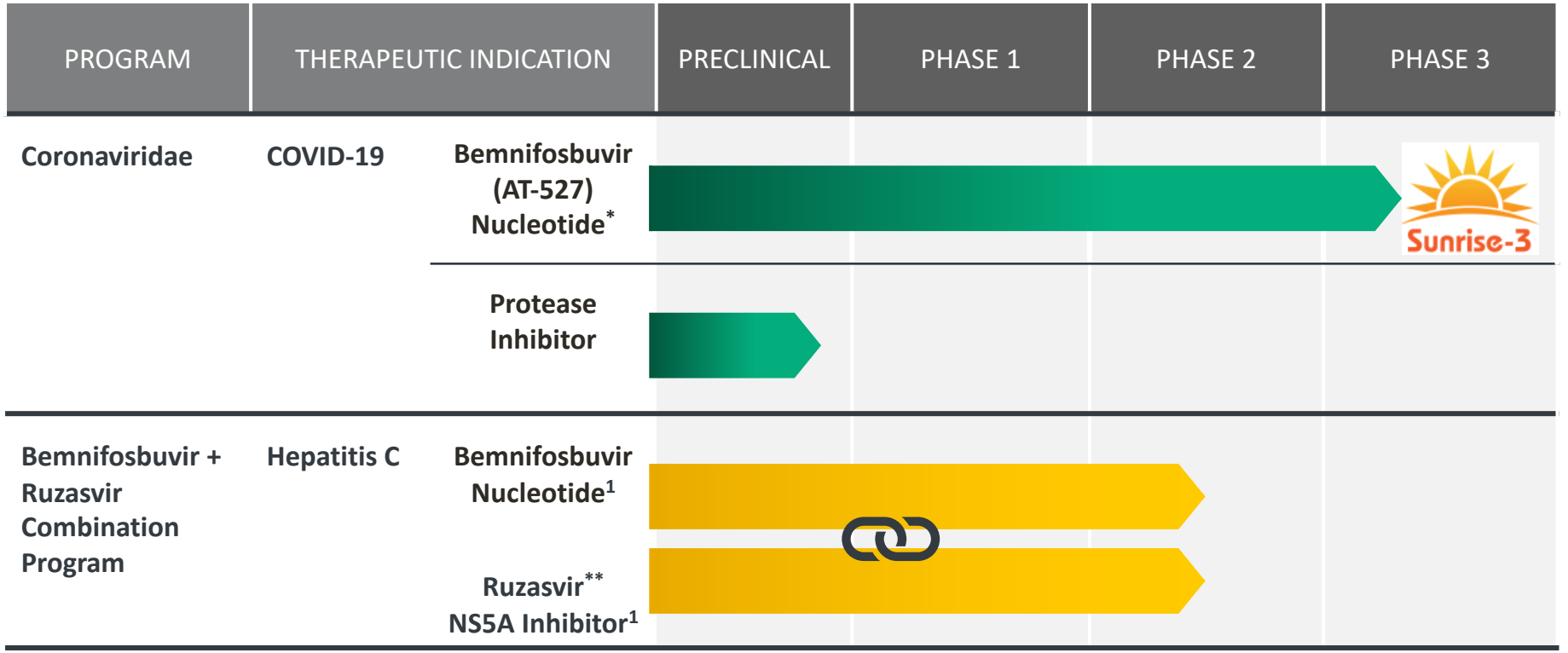
Market data and industry information used throughout this presentation are based on management's knowledge of the industry and the good faith estimates of management. We also relied, to the extent available, upon management's review of independent industry surveys and publications and other publicly 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:** interim analysis expected Q4'23
- Topline results 2024
- NDA submission targeted for YE'24

- **Protease inhibitor:** program update 2H'23

- **Ph 2 HCV trial:** lead-in cohort data expected Q4'23
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*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.

Atea's Compelling Value Proposition

Advancing Oral Antiviral Therapies with Multibillion Dollar Market Opportunities

- **COVID-19: Market expected to remain long-term multibillion dollar market opportunity**
  - ✓ Continued demand for innovative oral treatments to address key limitations of current therapies
- **HCV: Large and growing population suffering from chronic HCV with 2022 global market opportunity of ~ $3.5 billion in net sales**
  - ✓ 1.5 million new infections occurring globally per year
  - ✓ ~75% of diagnosed patients in the US are untreated

Innovative Therapies to Address Unmet Medical Needs

- **Executing global Phase 3 SUNRISE-3 trial evaluating bemnifosbuvir for treatment of COVID-19 in high-risk patients**
  - ✓ Fast Track designation granted for bemnifosbuvir for COVID-19
  - ✓ Secured regulatory approvals for SUNRISE-3 in > 50% of targeted countries to-date
  - ✓ Q4'23: SUNRISE-3 interim analysis expected
- **Initiating Phase 2 combination trial for bemnifosbuvir + ruzasvir in HCV patients**
  - ✓ Q2'23: First patient to be dosed
  - ✓ Q4'23: Expect initial results from lead-in cohort of 60 patients

Well-Capitalized with Strong Balance Sheet

- **$620.5 million in cash, cash equivalents and marketable securities as of 3/31/23**
- **Fully funded through key inflection points with cash runway into 2026**
- **Focused financial discipline to invest in clinical programs and execute on near and long-term opportunities**

Advancing a Focused Pipeline of Innovative Oral Antiviral Therapeutics Targeting Multibillion Dollar Markets to Deliver Significant Shareholder Value

COVID-19

Bemnifosbuvir Phase 3 Program

- COVID-19 Unmet Medical Need
- Bemnifosbuvir Global SUNRISE-3 Phase 3 Trial

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

COVID-19 Strategy Focused on Highest Unmet Medical Need

Unmet Medical Need

Limitations of Current Vaccines / Therapies

- Waning immunity of vaccines / natural infection
- Failure to mount immune response to vaccines in some patients
- No effective monoclonal antibodies for outpatient use
- Limitations with authorized oral antivirals: drug-drug interactions, safety concerns

Monotherapy

SUNRISE-3 Cohort for Registration

Bemnifosbuvir's profile addresses key limitations of current therapies

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

Combination Therapy

SUNRISE-3 Combination Cohort to Inform Development Strategy

Developing combination therapy for specific COVID-19 patient populations unable to mount immune response

- Additive benefit indicated *in vitro* with bemnifosbuvir + DAAs including protease inhibitors (PIs)
- Advancing internal PI program for combination therapy with bemnifosbuvir

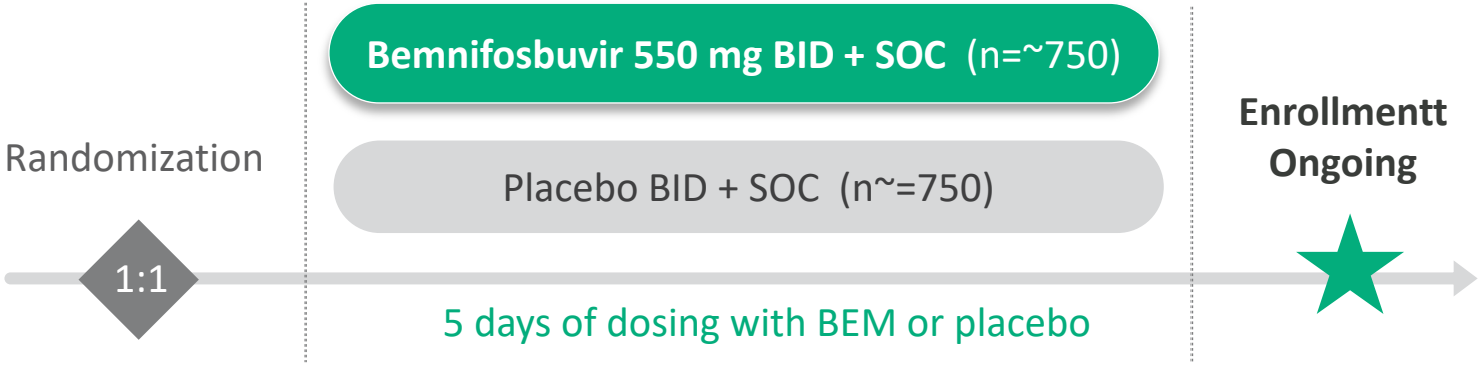
DAA – Direct Acting Antiviral

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: 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)
- 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

COVID-19

- Bemnifosbuvir Market Opportunity

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 (OAV) Retail Demand[1]

10-12M
Annual US Retail Rxs
# of COVID-19 OAV Rxs Last 12 months[1]
# of Annual Flu Antiviral Rxs[2]

× **Cost of Treatment**
($1K-2K)

= **$8-10B**
(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) *IQVIA TRxs for .Paxlovid and Lagevrio from May'22–Apr'23*
(2) *IQVIA TRxs for Influenza antivirals in 2018, 2019 (pre-pandemic)*

HEPATITIS C

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

- HCV Program Overview
- Compelling *In Vitro* Results
- Phase 2 Combination Trial

ATEA Pharmaceuticals

HCV Development for Bemnifosbuvir + Ruzasvir

Potential Best-in-Class Pan-genotypic Regimen

- Phase 2 trial evaluating convenient and short duration treatment in HCV-infected patients including those with compensated cirrhosis
  - First patient expected to be dosed Q2 2023

Bemnifosbuvir + Ruzasvir Competitive Profile

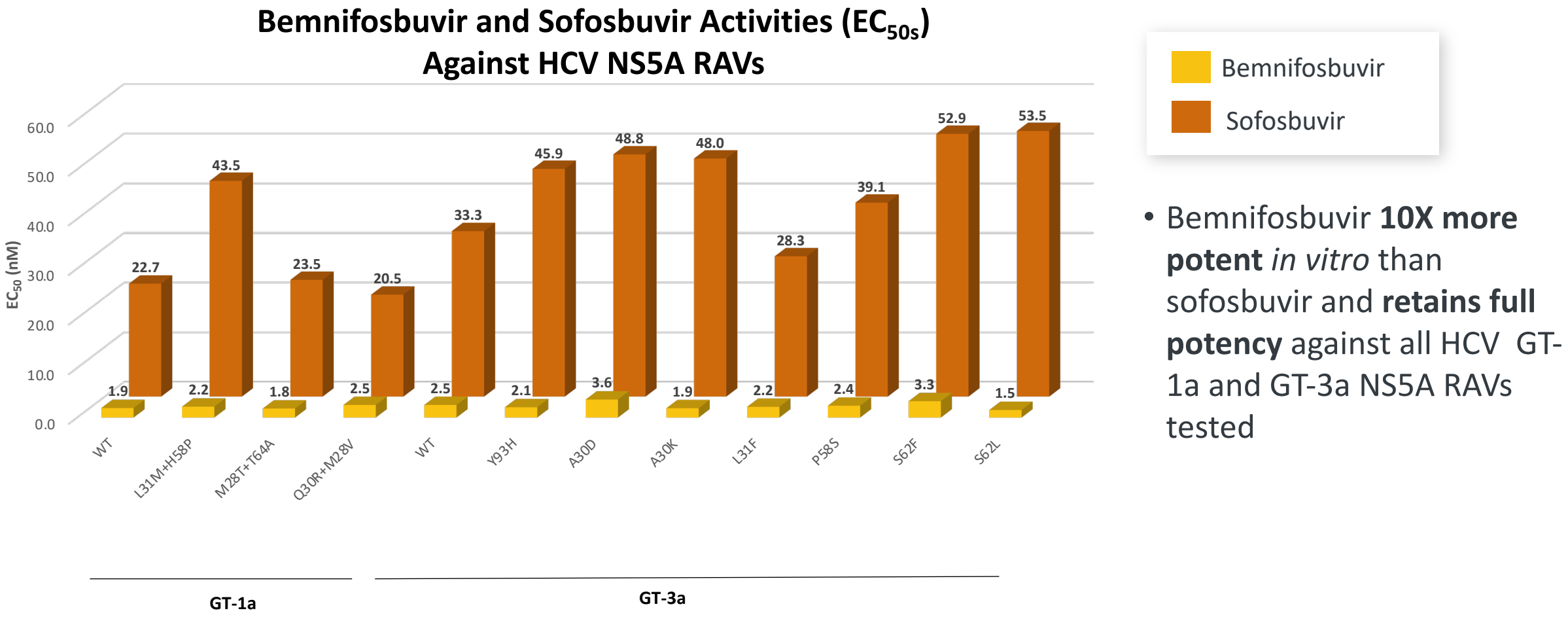
Convenient and short duration protease inhibitor-free treatment

Potential for first RBV-free therapy for decompensated disease

- ✓ Bemnifosbuvir is the most potent nucleotide inhibitor to-date being developed for HCV[1]
- ✓ Ruzasvir is a highly potent drug candidate[2]
- ✓ Potential for best-in-class pan-genotypic fixed-dose combination

1, 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 2.Journal of Viral Hepatitis, 2019, September:26 (9); 1127-1138.

Bemnifosbuvir Retains High Potency *In Vitro* Against HCV-GT-1a and GT-3a NS5A Resistance Associated Variants (RAVs)



- Bemnifosbuvir **10X more potent** *in vitro* than sofosbuvir and **retains full potency** against all HCV GT-1a and GT-3a NS5A RAVs tested

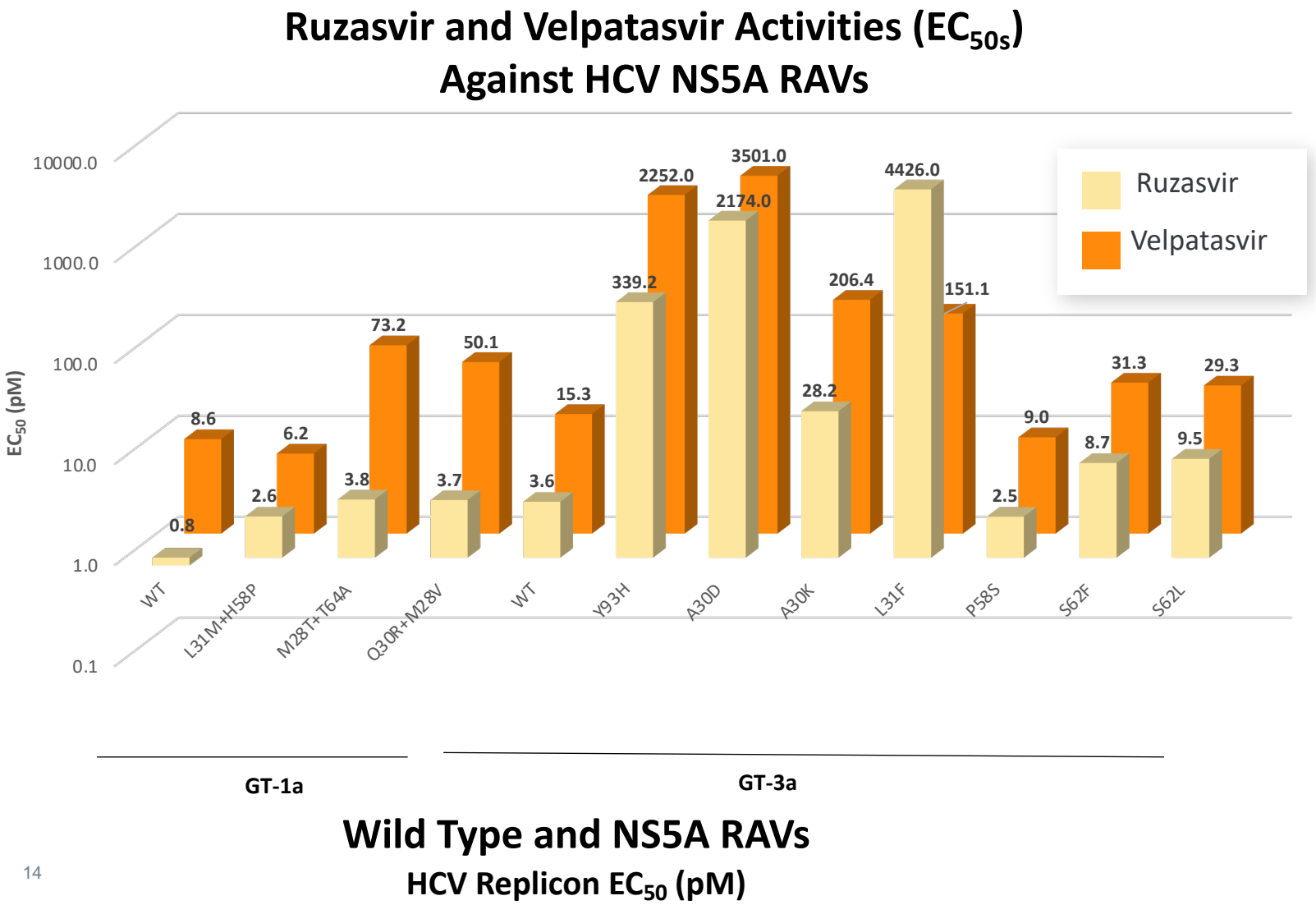
In Vitro Potency of HCV NS5A Inhibitors

Ruzasvir has **a more favorable** *in vitro* potency profile as compared to velpatasvir (GILD) and **similar** *in vitro* potency to pibrentasvir (ABBV)

	HCV Replicon EC_{50} (pM)							
Inhibitor	**GT1a**	**GT1b**	**GT2a**	**GT2b**	**GT3a**	**GT4a**	**GT5a**	**GT6a**
ruzasvir – Atea[a] (MRK)	1	2	1	4	2	2	1	4
velpatasvir – GILD[b]	12	15	9	8	12	9	75	6
daclatasvir – BMS[c]	50	9	71		146	12	33	
pibrentasvir – ABBV[d]	2	4	2	2	2	2	1	3
ravidasvir - Presidio[e]	~110	~20	~120		~1100	~50	~40	~400

[a]Asante-Appiah et al. AASLD, 2014
[b]Cheng et al. EASL, 2013
[c]Gao et al. Nature, 2010
[d]Ng et al. CROI, 2014
[e]Colonno et al. EASL, 2011

Ruzasvir Retains *In Vitro* High Potency Against HCV GT1a and 3a Resistance Associated Variants (RAVs)



- Ruzasvir **5 to 10 fold more potent** *in vitro* than velpatasvir in HCV GT-1a and GT-3a, one of the most difficult to treat genotypes
- Ruzasvir, in general, **maintains a better potency profile** than velpatasvir in most NS5A clinically relevant RAVs

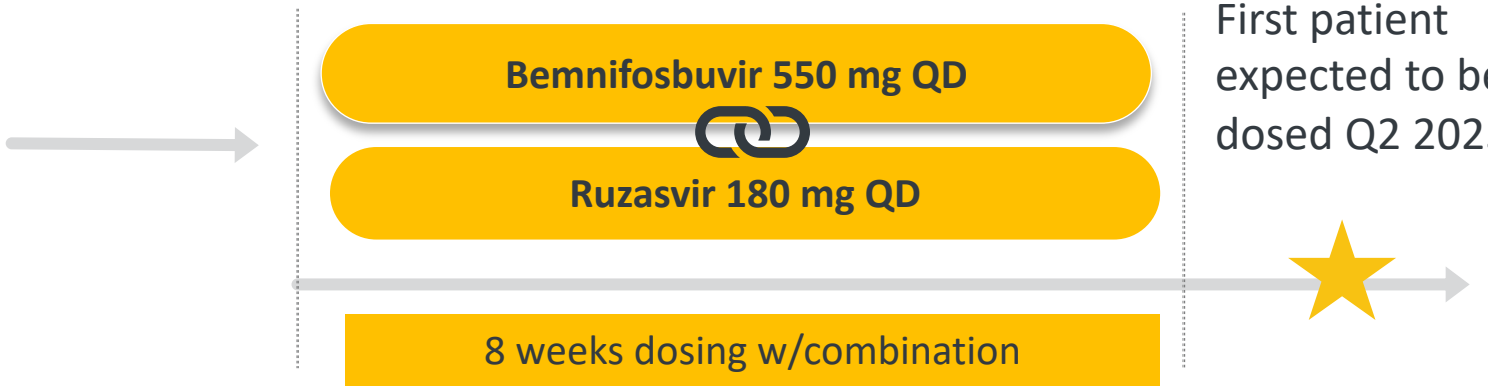
Summary: Potential for Best-in-Class Pan-Genotypic Regimen

- **Bemnifosbuvir is at least 10X more potent than sofosbuvir**; retains 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' 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

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

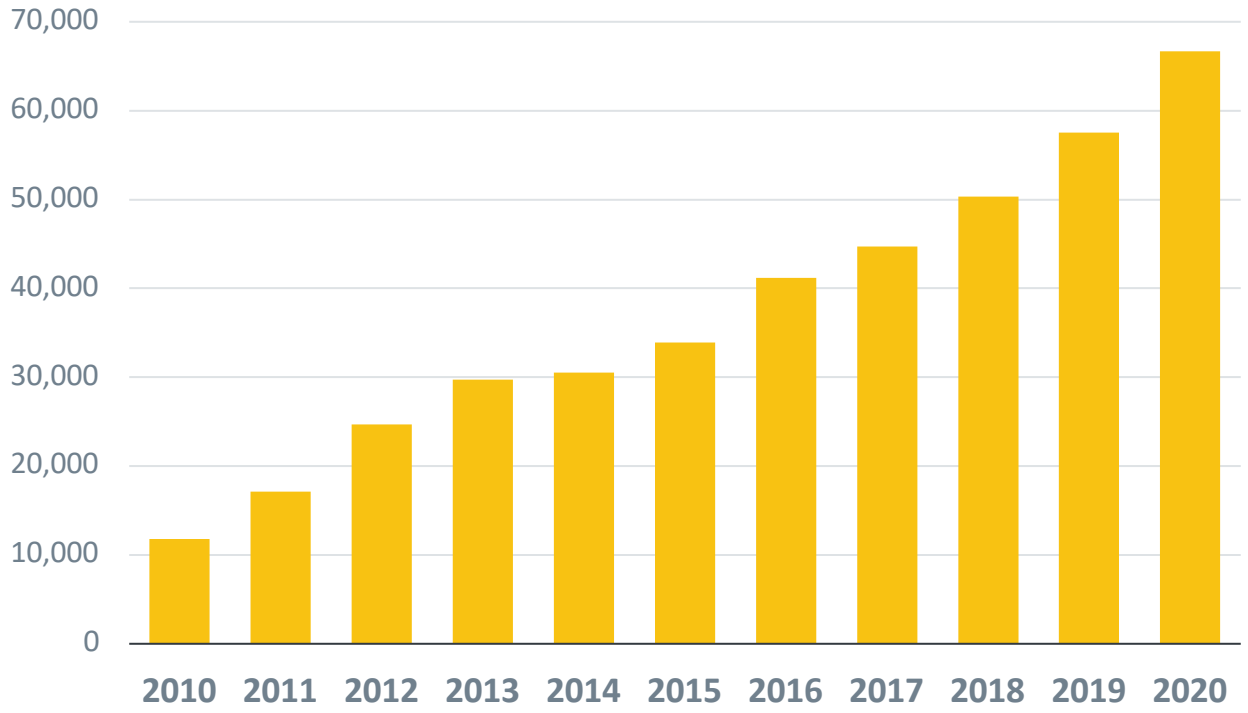
HEPATITIS C

- HCV Market Opportunity

Addressing Resurgence of HCV Infections

Newly Diagnosed HCV cases in the US increased 400% between 2010-2020

Estimated Cases of Newly Diagnosed Hepatitis C Infections in US



- Proposed US government program seeks to eliminate HCV
  - Recognizes resurgence
  - Expected to spur growth in DAA uptake and revenues
- According to the WHO, 58M people globally have chronic HCV infection, about 1.5M new infections occur per year and nearly 300K people die every year from HCV-related liver diseases

Source: CDC, National Notifiable Diseases Surveillance System.
Reference: Klevens RM, Liu, S, Roberts H, et al. Estimating acute viral hepatitis infections from nationally reported cases. Am J Public Health 2014; 104:482. PMC3953761.
Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm. Published September 2022.

2022 Hepatitis C Global Market ~$3.5B in Net Sales

US Accounted for ~53% of Global DAA Net Sales

With a best-in-class profile, bemnifosbuvir + ruzasvir has potential to command significant market share

Large Number of Patients

- In the US, ~ 2M patients undiagnosed
- ~75% of diagnosed patients in US are untreated
- Incidence of HCV is rising in US, with new infections exceeding cures achieved with antivirals

Market Opportunity

- Mavyret® NRx share ~43%
  Epclusa® NRx share ~53%
- Differentiated product profile relating to food effect, duration of therapy and tablet burden / packaging may affect prescribing behavior

Net Pricing Remains High

- Net therapy costs range between $11K-$17K in US
- Net pricing has stabilized following introduction of authorized copies

Concentrated US Prescriber Base

- ~6K prescribers write ~80% of DAA prescriptions
- Top 10 prescribers account for 5% of total prescription market

Sources: IQVIA Analytics Link, Gilead 2022 Investor Report, AbbVie 2022 Investor Report, Atea Custom Research August 2022, IQVIA Exponent

Closing Remarks

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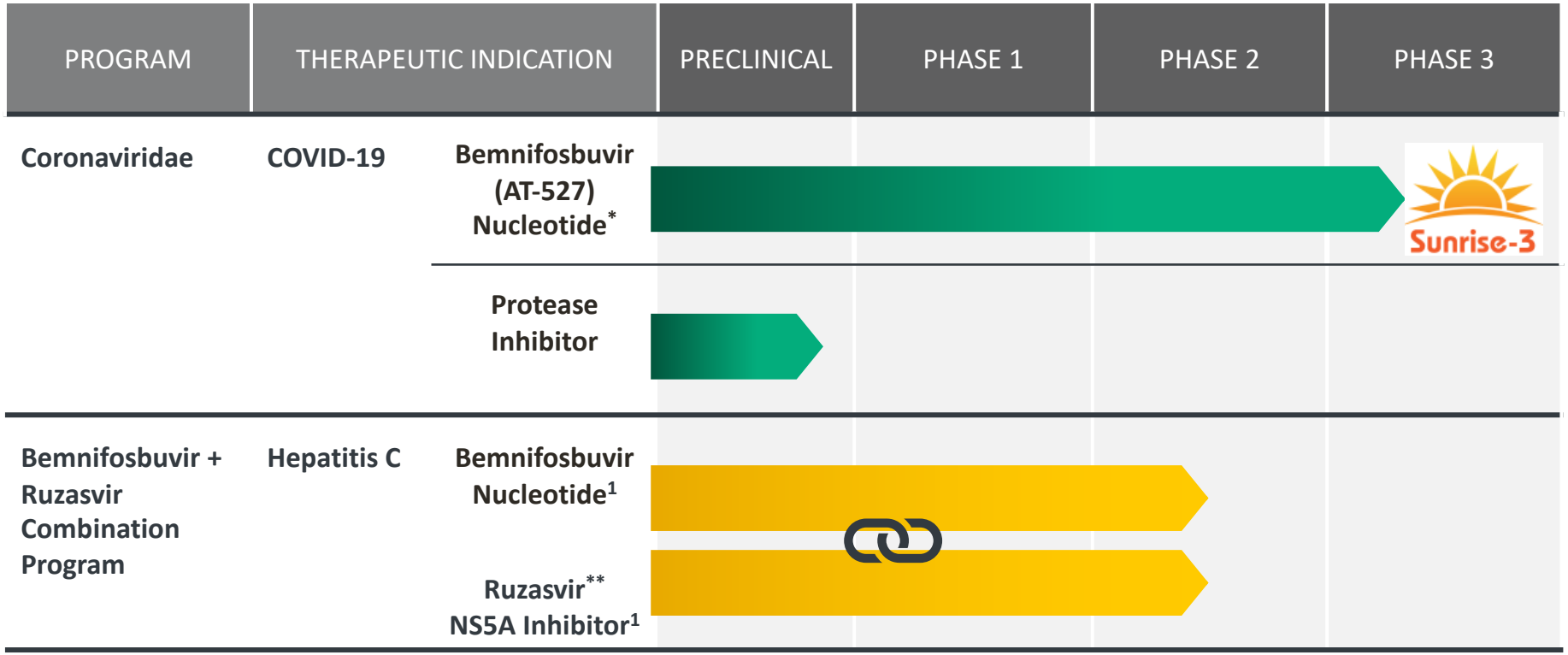

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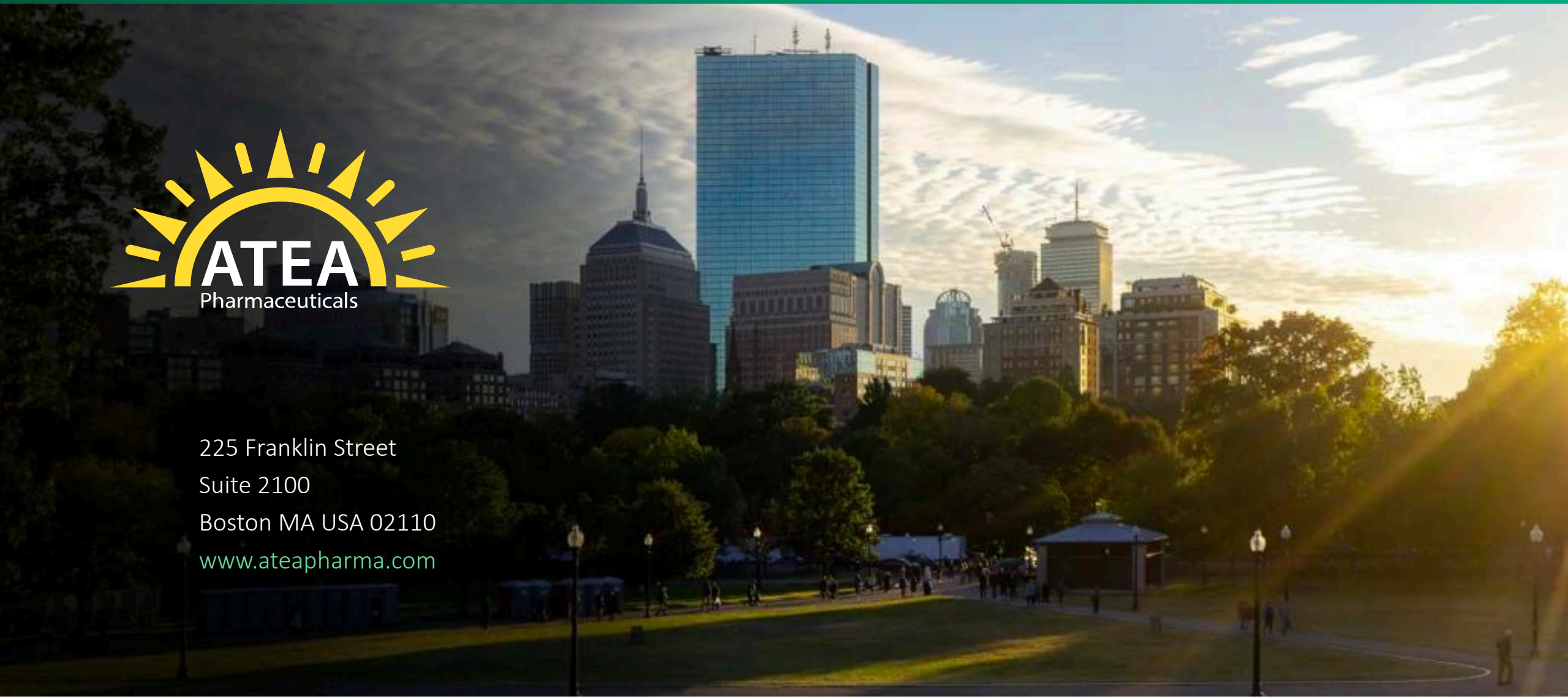

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