

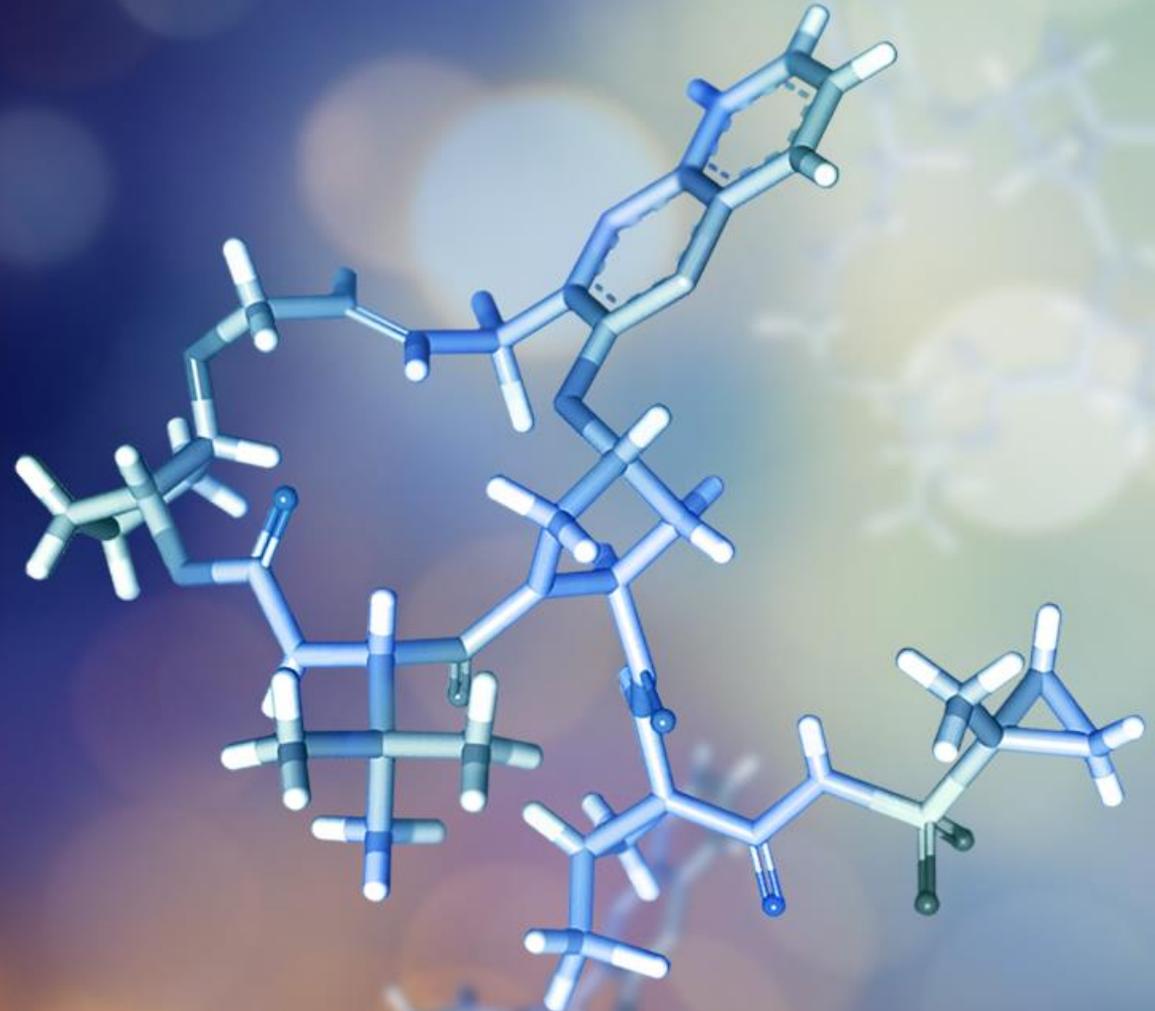
ENANTA

Pharmaceuticals

CREATING SMALL MOLECULE DRUGS
FOR VIRAL INFECTIONS AND LIVER DISEASES

Corporate Presentation

November 18, 2021



Forward Looking Statements Disclaimer

This presentation contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our research and development programs, our business and the industry in which we operate. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, as well as other comparable terminology. These forward-looking statements include, but are not limited to, statements about overall trends, royalty revenue trends, research and clinical development plans and prospects, liquidity and capital needs and other statements of expectations, beliefs, future plans and strategies, anticipated events or trends, and similar expressions. These forward-looking statements are based on our management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and our management’s beliefs and assumptions. These forward-looking statements are not guarantees of future performance or results and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this presentation may turn out to be inaccurate.

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A Proven Approach to Drug Discovery



Using a proven, chemistry-driven approach to develop best-in-class small molecule drugs for virology and liver disease

**Robust Clinical
Stage Pipeline**

-
- RSV:** Phase 2b in adult patients (RSVP)
Phase 2b in adult stem cell transplant patients (RSVPTx)
Phase 2 in pediatric patients (RSVPEDs)
 - HBV:** Two Phase 1b studies completed (core inhibitor)
 - COVID-19:** Phase 1 (protease inhibitor) to initiate in early 2022
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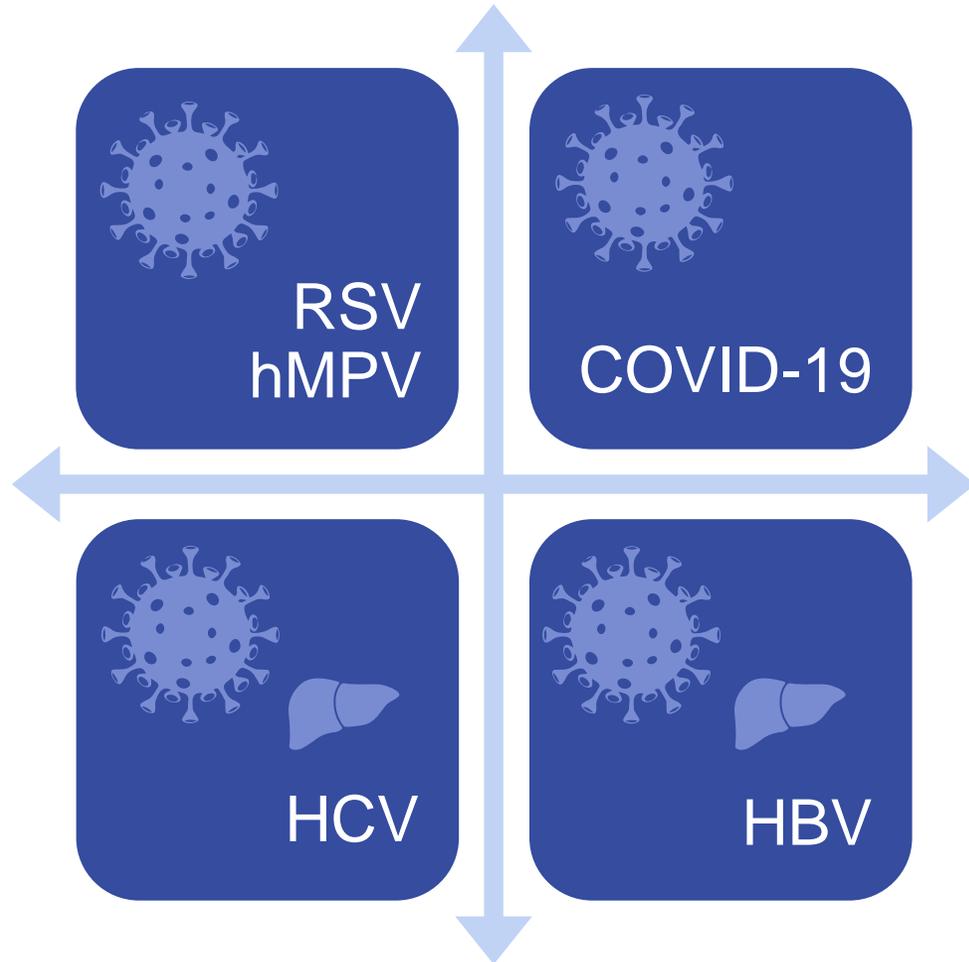
**Proven Track
Record of Success**

Glecaprevir – HCV protease inhibitor in MAVYRET®/MAVIRET®
\$122M in fiscal 2020 royalties on HCV regimens

**Strong
Balance Sheet**

Strong balance sheet and royalties to fund robust pipeline
\$373M in cash at 6/30/21

Our Therapeutic Focus



Leveraging our core strength in Hepatitis C to become a leader in oral treatments for **viral** infections and **liver** diseases

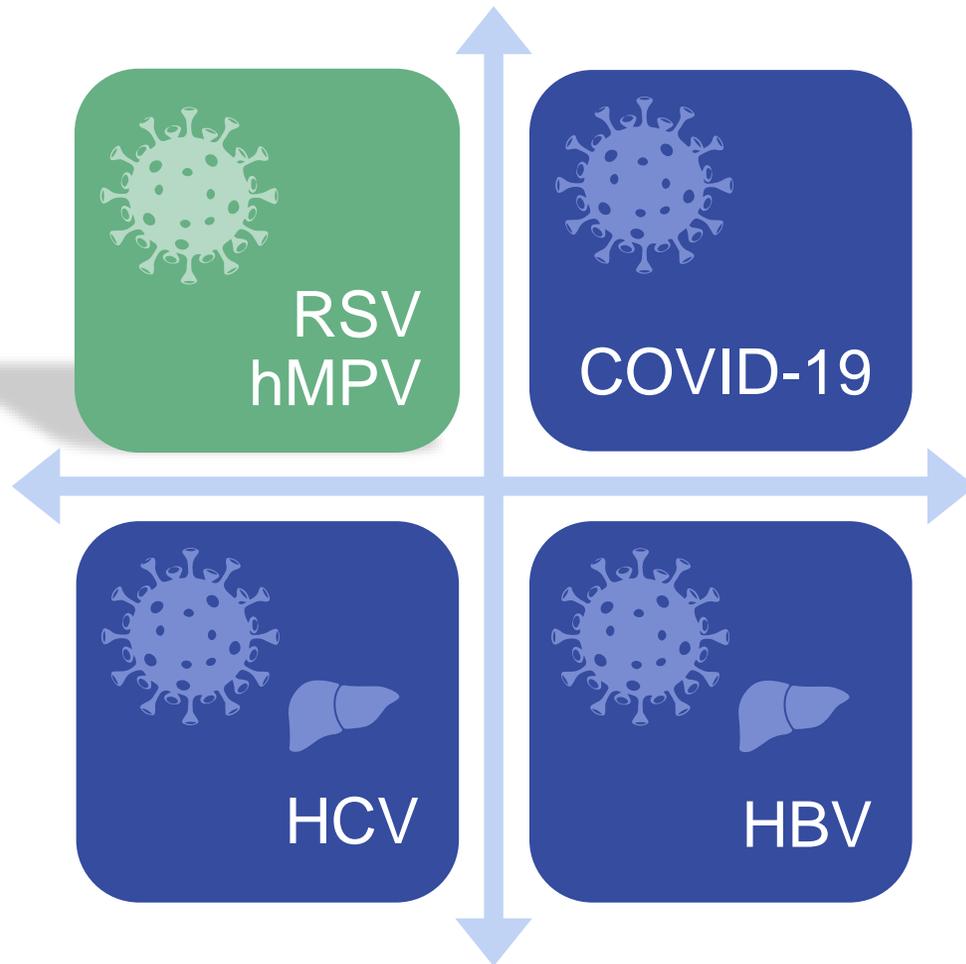
Several new therapeutic areas with goal of building multiple approaches in each

Enanta Pipeline

PRODUCT CANDIDATE			DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	MARKET	
Virology: Liver	HCV	Protease Inhibitor	Glecaprevir-containing pangenotypic 2-DAA combo						
	HBV	Core Inhibitor	EDP-514						
Virology: Respiratory	RSV	N-Protein Inhibitor	EDP-938				RSVP		
			EDP-938				RSVPEDs		
			EDP-938				RSVTx		
		L-Protein Inhibitor							
	hMPV	Non-Fusion Inhibitor							
	COVID-19	SARS-CoV-2 Inhibitor	EDP-235						
Discovery or Preclinical	RSV, HBV, other								
For Out-license	NASH	FXR Agonists	EDP-305 (Phase 2), EDP-297 (Phase 1)						

*Fixed-dose combination contains glecaprevir and AbbVie's NS5A inhibitor, pibrentasvir. Marketed by AbbVie as MAVYRET® (U.S.) and MAVIRET® (ex-U.S.).

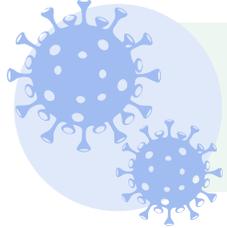
Our Therapeutic Focus



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Several new therapeutic areas with goal of building multiple approaches in each

Respiratory Syncytial Virus (RSV)



Causes severe lung infections, including bronchiolitis (infection of small airways in the lungs) and pneumonia (an infection of the lungs). No safe and effective treatments.

Higher risk populations for severe illness:

- Young infants and children
- Premature babies
- Older adults especially those 65+ years
- People with chronic lung disease or certain heart problems
- People with weakened immune systems (e.g. HIV, organ transplant, chemotherapy)

RSV at a Glance

Children < 5 years^{1,2}

Adults > 65 years³

33M global cases

3M global hospitalizations

120K global deaths

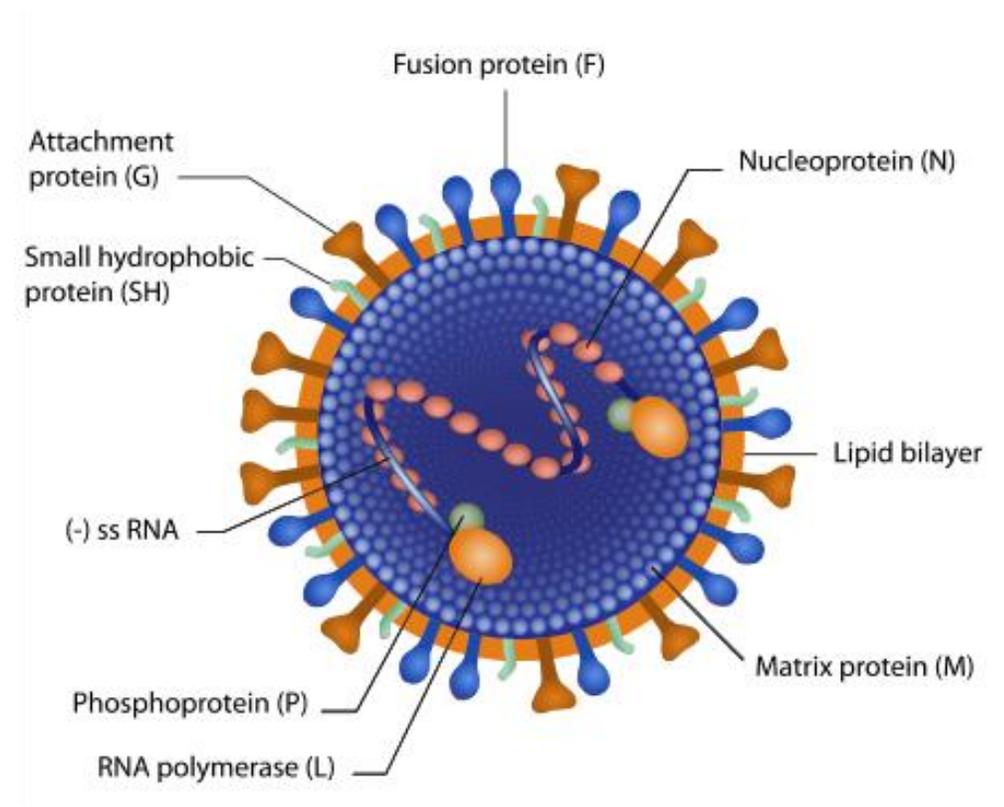
2.1M U.S. hospitalizations/
outpatient visits, of which
78% are older than 1 year

177K US hospitalizations

14K US deaths

EDP-938: N-Protein Inhibitor for RSV

- EDP-938 is the only N-inhibitor under clinical evaluation
 - Non-fusion approach directly targets viral replication vs. entry
 - Granted Fast Track Designation by FDA
- Strong preclinical virologic profile:
 - Nanomolar inhibitor of both RSV-A and RSV-B activity
 - Maintained antiviral potency across all clinical isolates tested
 - Demonstrated high-barrier to resistance *in vitro*
 - Synergy with other drug mechanisms (e.g. fusion and L-inhibitors)
 - Active against virus variants resistant to other mechanisms
 - Robust *in vivo* efficacy data



EDP-938 Development Program

Phase 1 Results

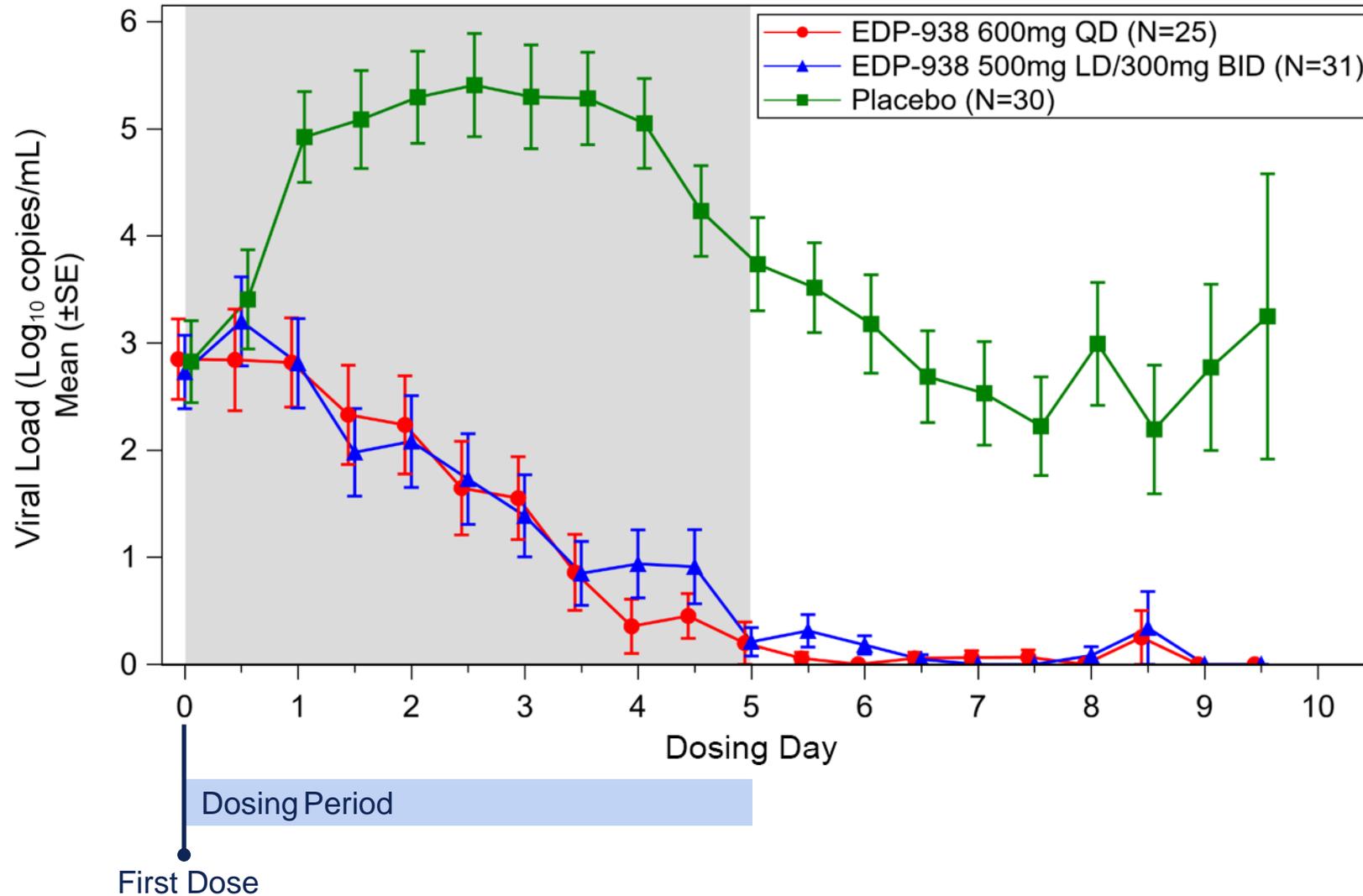
- Safe and well tolerated, no SAEs, AEs were mild
- At Phase 2 doses, mean trough levels 30x higher than EC90 of EDP-938 against RSV-infected human cells

Phase 2a Challenge Study Results

- Primary and key secondary efficacy endpoints were achieved ($p < 0.001$) at both dose levels after 5 days of dosing
 - Primary endpoint: Reduction in area under the curve (AUC) viral load in the intent-to-treat-infected population (ITT-I)
 - Secondary endpoint: Reduction in Total Symptom Score (TSS)
- Mean C_{trough} concentrations were approximately >20-40x higher than EC_{90}
- Well tolerated with safety profiles similar to placebo
- Consistent profile observed in >250 subjects exposed to EDP-938 for up to 7 days in Phase 1 and Phase 2a

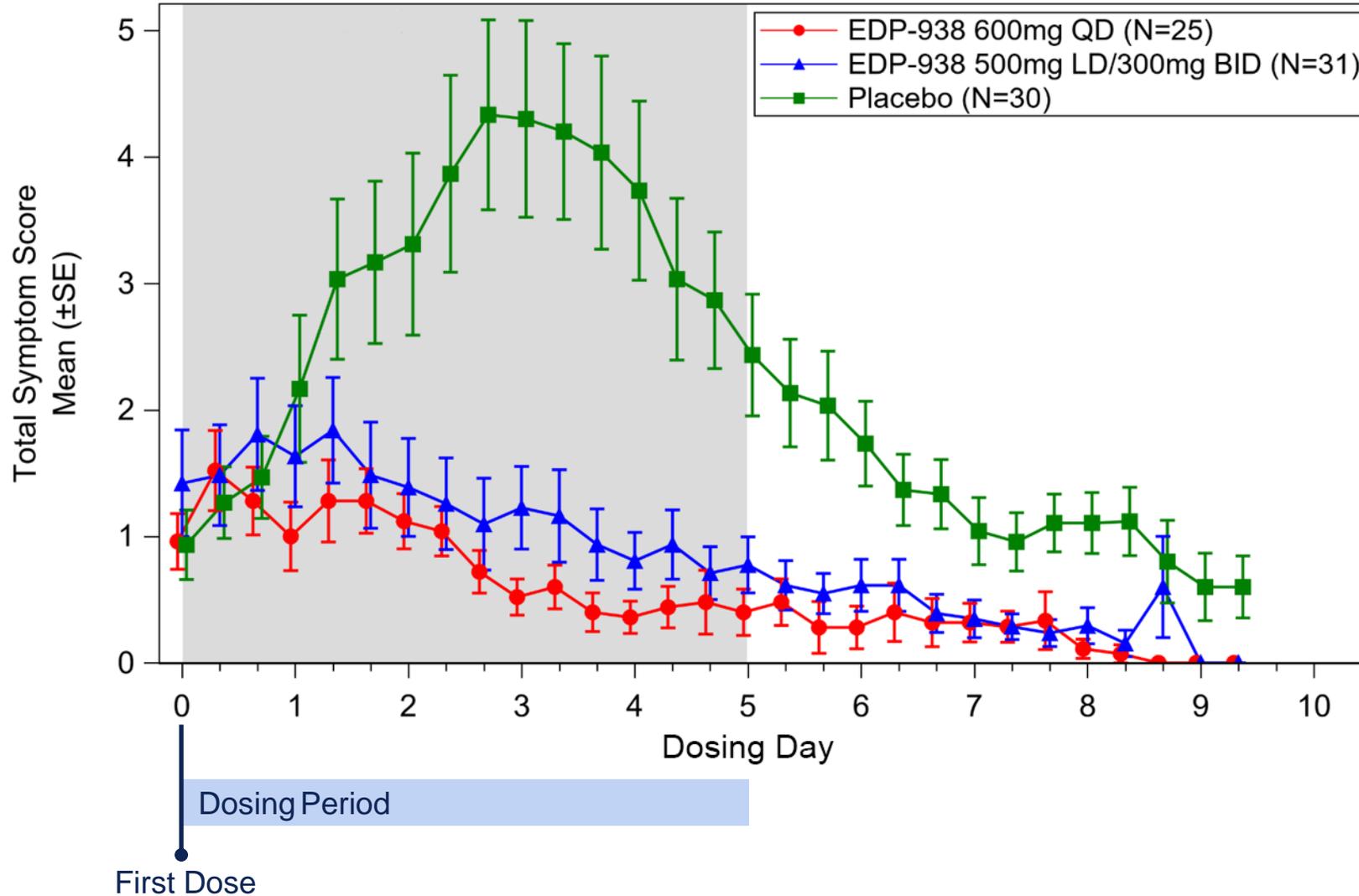
EDP-938 Robust Antiviral Effect

Rapid and Sustained Reduction in Viral Load in Both Active Arms Compared to Placebo (71%, 74% ↓ AUC; P<0.001)

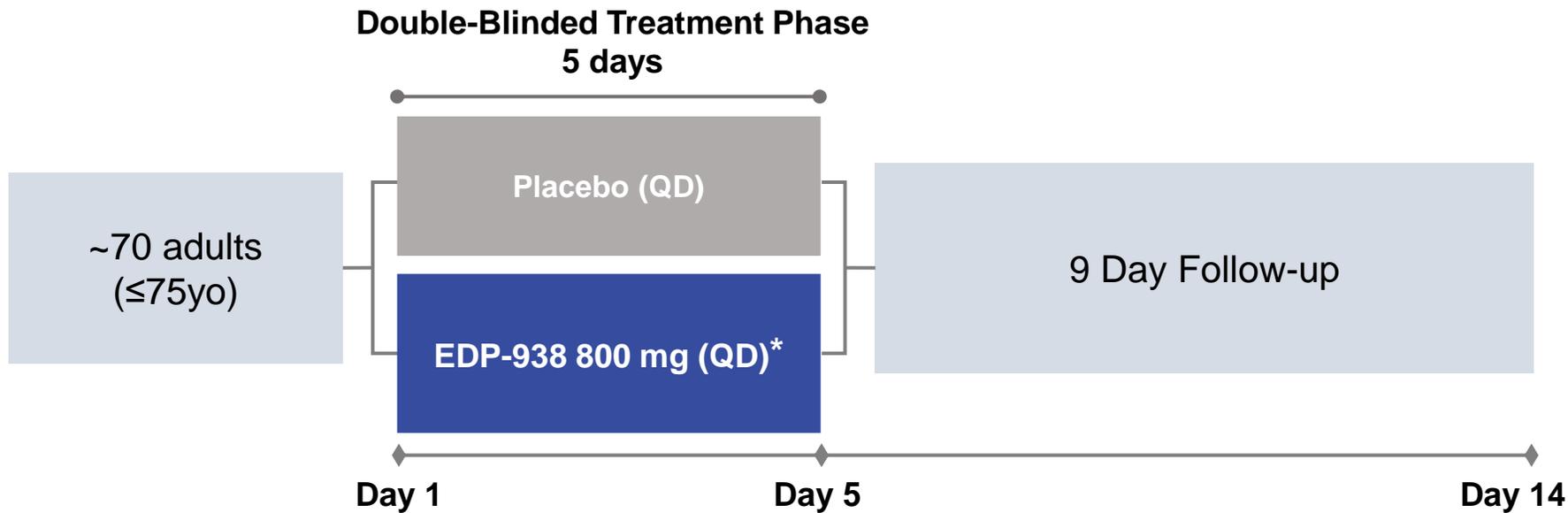


EDP-938 Robust Symptom Reduction

Rapid and Sustained Attenuation of RSV Symptoms in Both Active Arms Compared to Placebo (68%, 74% ↓ AUC; P<0.001)



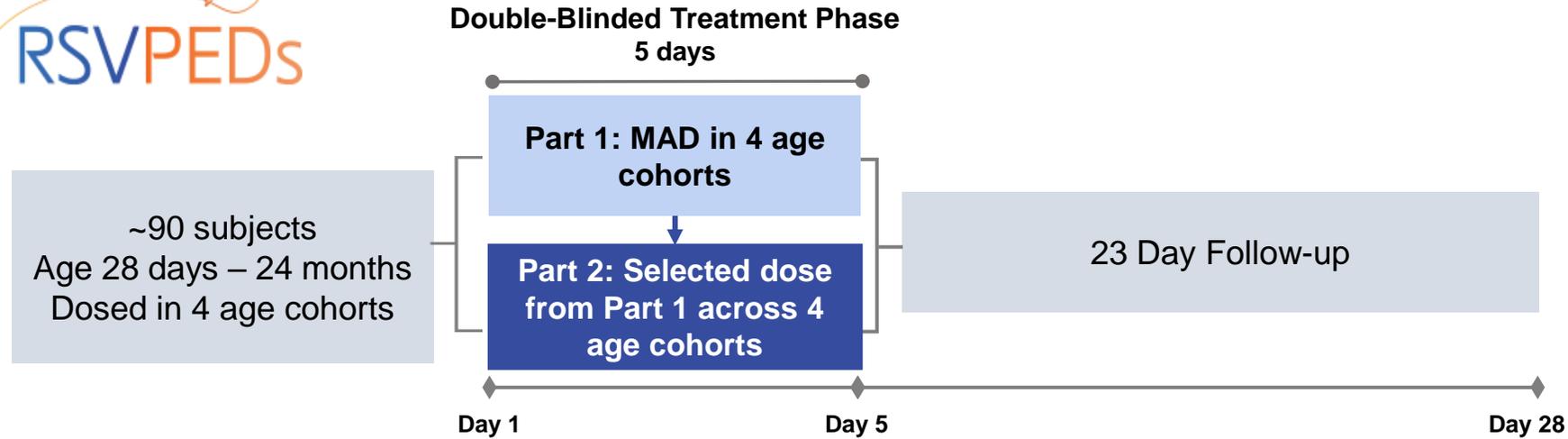
RSVP: A Phase 2b Study of EDP-938 in Adult Outpatients With RSV



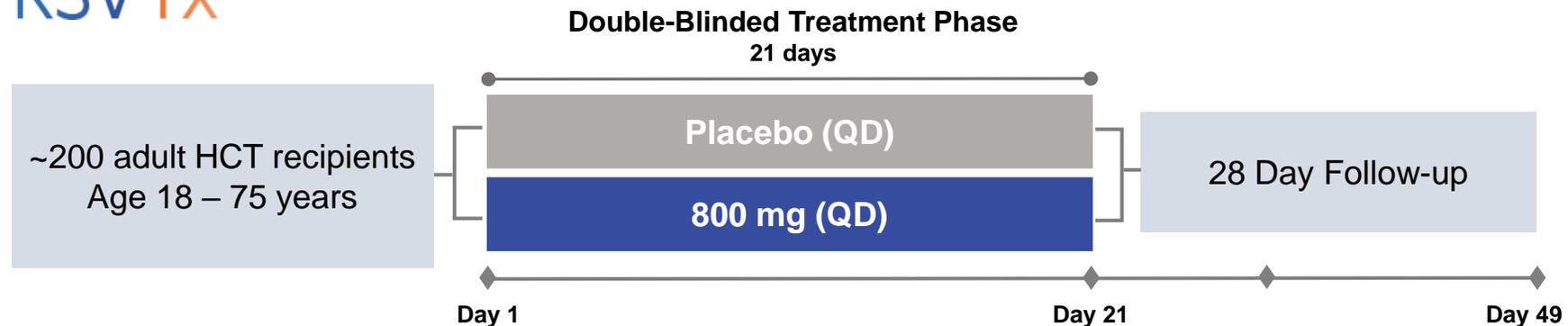
- **Primary Objective:**
Effect of EDP-938 on progression of RSV infection by assessment of clinical symptoms measured over the 14-day study period
- **Secondary Objective:**
Antiviral efficacy, safety and PK of EDP-938

*Equivalent to 600mg suspension dosage form used in challenge study

Two Additional Phase 2 Clinical Trials: RSVPEDs and RSVTx



- **Primary Objective, Part 1:** Safety and PK of EDP-938
- **Primary Objective, Part 2:** Antiviral activity of EDP-938

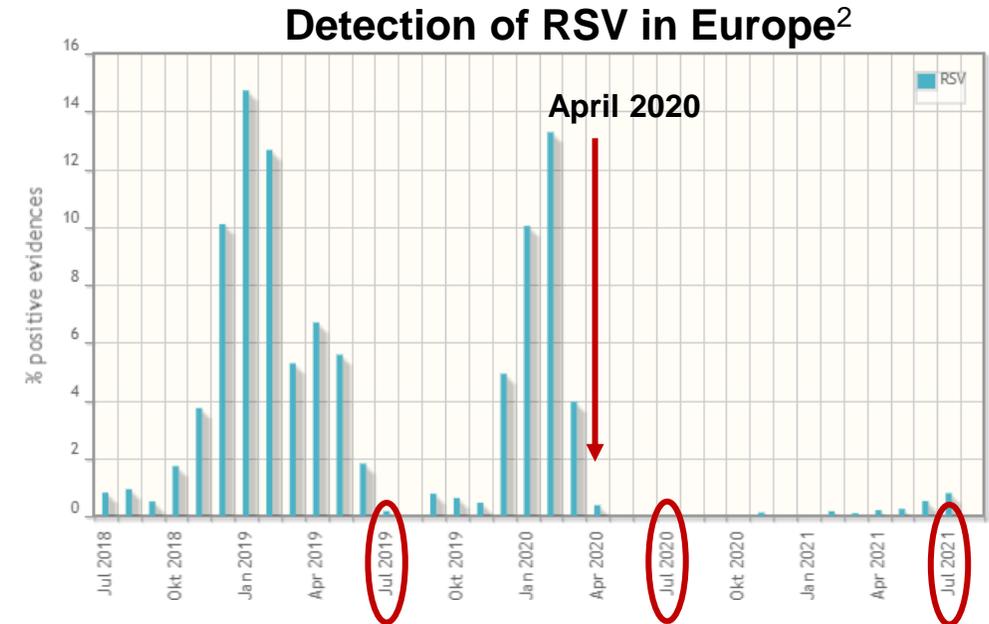


- **Primary Objective:** Effect of EDP-938 on development of LRTC in HCT subjects with acute RSV URTI
- **Secondary Objectives:** Viral load, progression to respiratory failure or all-cause mortality, PRO, PK and safety

Preparing for When RSV Returns

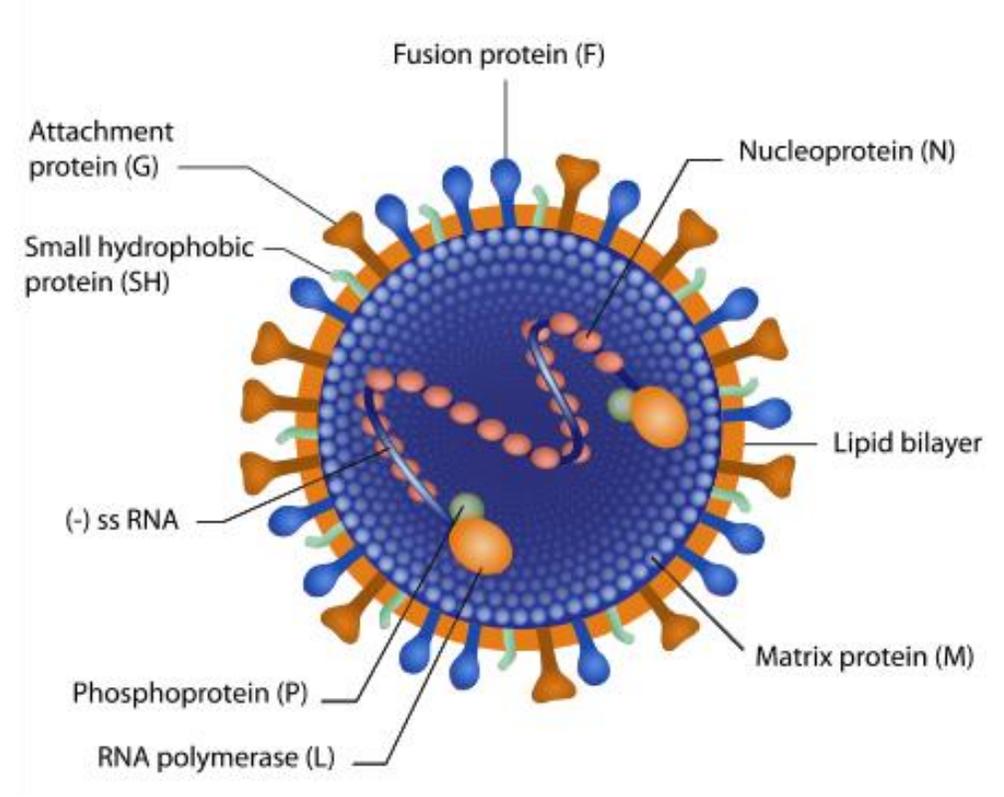
- RSV, like influenza, did not emerge during the usual late-fall and winter RSV season in the Northern Hemisphere in 2020-2021
- In June, the CDC issued a health advisory to notify clinicians and caregivers about increased interseasonal RSV activity across parts of the Southern United States¹
- Hopeful enrollment in the RSVP study will be complete during the Northern Hemisphere winter season if there are no renewed social distancing interventions
- Assuming this enrollment occurs, data are expected in the first half of 2022

Sources: 1. [CDC Health Advisory](#) 2. [Clinical Virology Network](#)

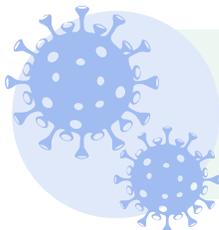


RSV L-Protein Inhibitor

- Enanta's newest RSV program
- RSV L-protein is a viral RNA-dependent RNA polymerase that contains multiple enzyme activities required for RSV replication
- Novel RSV L-protein inhibitor leads have nanomolar potency against RSV-A and RSV-B
- Not expected to have cross resistance to other classes of inhibitors
 - Potential to be used alone or in combination with other RSV mechanisms, such as EDP-938

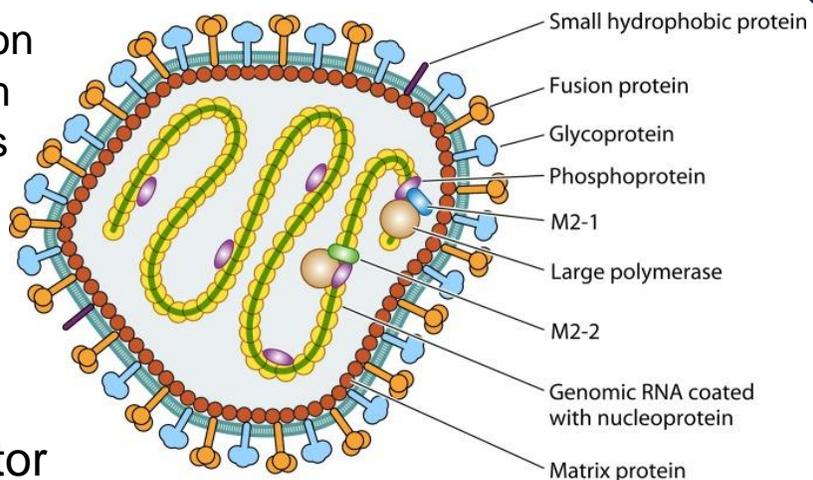


Human Metapneumovirus (hMPV)



Important cause of respiratory tract infections (RTIs), particularly in children, the elderly and immunocompromised individuals

- Paramyxovirus closely related to RSV
 - hMPV replication dependent on several viral proteins that form a multiprotein complex in cells
 - Multiple potential targets for hMPV drug discovery
- No approved vaccine or therapeutics available
- Enanta nanomolar hMPV inhibitor leads under active optimization



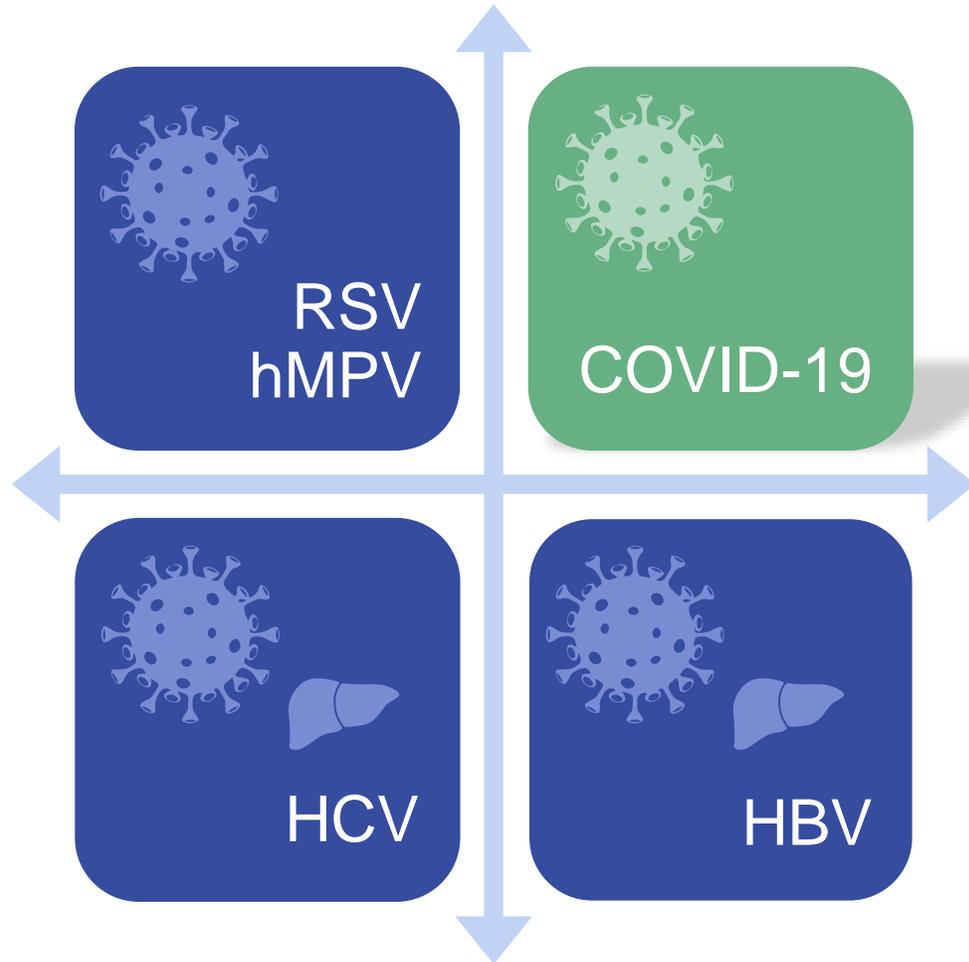
hMPV at a Glance

Serious respiratory infections can occur in children under 5 years old

Second most common cause of lower RTIs in children (behind RSV)

Reinfection with hMPV occurs throughout life

Our Therapeutic Focus

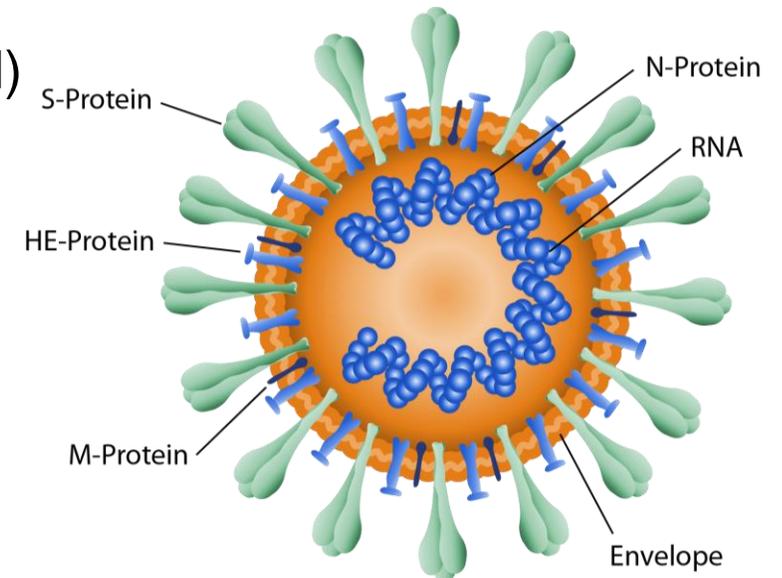


Leveraging our core strength in Hepatitis C to become a leader in oral treatments for **viral** infections and **liver** diseases

Several new therapeutic areas with goal of building multiple approaches in each

EDP-235: Oral Protease Inhibitor Specifically Designed for COVID-19

- Novel, oral, direct-acting antiviral specifically designed to target the SARS-CoV-2 protease
- Potent inhibition of SARS-CoV-2 3CLpro enzyme ($IC_{50} = 5.8 \text{ nM}$)
 - Activity retained against proteases from SARS-CoV-2 variants
- Potent and selective inhibition of SARS-CoV-2 replication in multiple cellular models, including primary human airway epithelial cells ($EC_{90} = 33\text{nM}$)
- Active against other human coronaviruses
- High barrier to resistance observed preclinically
- Predicted human efficacious dose of 100 to 500mg once-daily
 - Good oral bioavailability (95% in rats), target tissue distribution (lung to plasma AUC ratio >4), and long half-life (16 hours)
- Completed IND-enabling studies; entering the clinic in early 2022



EDP-235: Highly Potent 3CLpro Inhibitor and Retains Activity Against SARS-CoV-2 Variants

Assay		Lineage	Potency (nM)
Biochemical Activity	3CLpro FRET (IC ₅₀)	A [Original] / B.1.617.2 [Delta]*	5.8 ± 3.7
		B.1.1.318 (T21I)	2.0 ± 0.1
		B.1.351 (K90R) [Beta]	2.8 ± 0.9
		B.1.617.3 (A194S)	5.7 ± 0.5
		C.36.3 (G15S)	4.7 ± 2.5
		P.2 (L205V) [Zeta]	3.4 ± 1.0
Cellular Activity	HuH-7, SARS-CoV-2 Replicon	A	4.5 ± 1.7
	Vero E6, CPE (EC ₅₀)	A (+P-gpi) [Original]	5.1 ± 0.3
	pHAEC, Viral yield or qPCR (EC ₉₀)	B.1	33
	Vero E6, Viral yield (EC ₅₀)	B.1	12.1 ± 5.6
	Vero E6, Viral yield (EC ₅₀)	B.1.1.7 [Alpha]	46
	Vero E6, Viral yield (EC ₅₀)	B.1.351 [Beta]	44

FRET = fluorescence resonance energy transfer; CPE = cytopathic effect; P-gpi = P-glycoprotein inhibitor CP-100356 (2 μM); pHAEC = primary human airway epithelial cells; qPCR = quantitative polymerase chain reaction.

*The 3CLpro sequences for the ancestral A lineage and B.1.617.2 (Delta) variant are identical

EDP-235 Preclinical Profile Suggests Potential for Best-in-Class Antiviral Treatment for SARS-CoV-2 Infection

Preclinical Properties		EDP-235 ¹	PF-07321332 ²	PBI-0451 ³	S-217622 ⁴	Molnupiravir ⁵	AT-527 ⁶
Mechanism		Protease	Protease	Protease	Protease	Polymerase	Polymerase
Potency	Enzyme IC ₅₀ (nM)	5.8	19	20 – 30	13	n/a	n/a
	Vero Cell EC ₅₀ (nM)	5.1	75	n/a	370	1410*	470** (EC ₉₀ in pHAEC)
Oral Bioavailability ⁷		95%	34 – 50%	n/a	97%	36 – 56%	n/a
Lung Penetration ⁸		4.1	0.8 ⁹	~1	n/a	1.8	1.2 (monkeys) 0.8 (humans)
Projected Efficacious Dose		100 – 500mg QD	250mg/100mg RTV q12h	500mg BID or 1500mg QD	QD	800mg BID	550mg BID or 1100mg BID

*Data from N-hydroxycytidine (NHC): molnupiravir prodrug of NHC

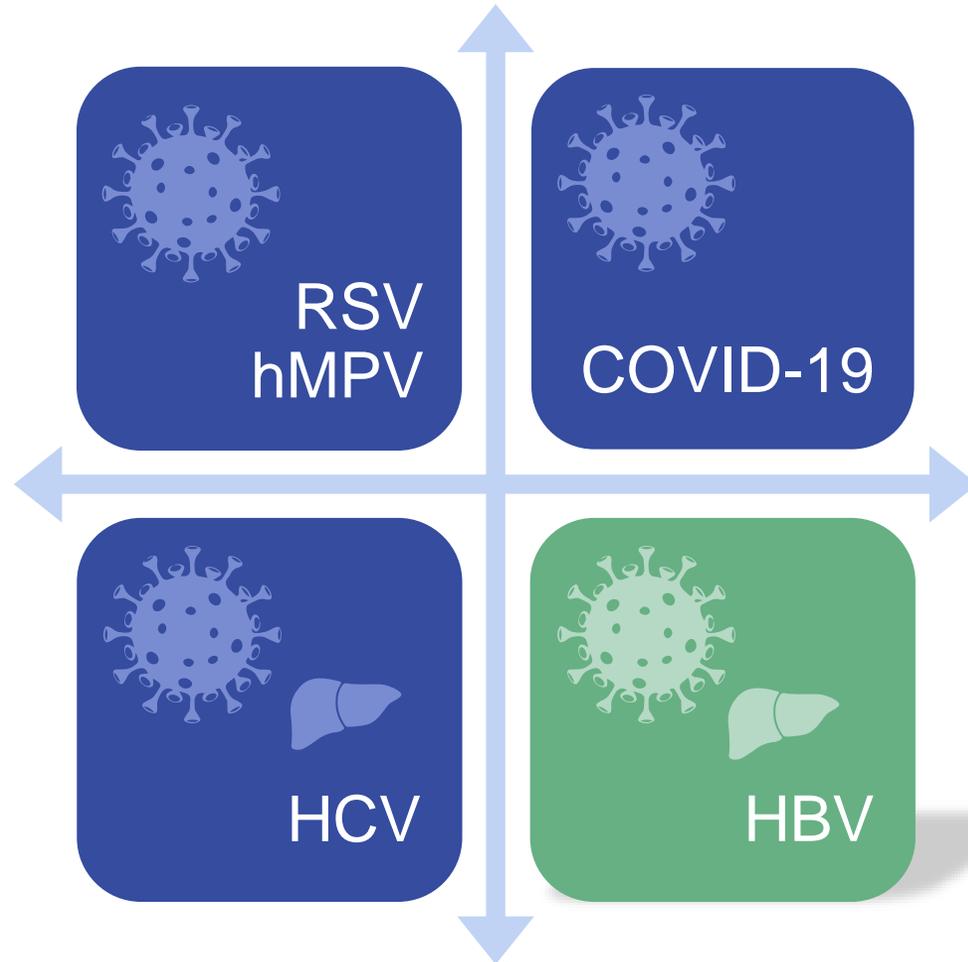
**Data from AT-511 (AT-527 is the hemi-sulfate salt of AT-511)

pHAEC: primary human airway epithelial cells

RTV: ritonavir

1. Jiang *et al.*, ISIRV Poster #120, Oct 19, 2021
2. Owen *et al.*, [medRxiv](#), July 2021; Pfizer 2Q2021 earnings presentation
3. Pardes Corporate [Presentation](#), June 2021
4. Shionogi [R&D Day](#), Sept 28, 2021, Tachibana, *et al.*, ISIRV oral presentation, Oct 20, 2021
5. Grobler *et al.*, ID Week 2021, Poster 543; Painter *et al.*, Antiviral Research Nov 2019
6. Good *et al.*, AAC, 2021; Atea 2Q2021 earnings presentation; Atea press release Oct 19, 2021
7. Oral bioavailability in rats for EDP-235, PF-07321322 and S-217622; in mice for molnupiravir
8. AUC lung to plasma ratio in rats for EDP-235, PF-07321332, in mice for molnupiravir; C₁₂ lung to plasma ratio in monkeys and humans for AT-527
9. Data for PF-07321332 generated by Enanta

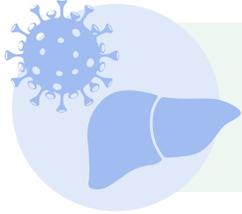
Our Therapeutic Focus



Leveraging our core strength in Hepatitis C to become a leader in oral treatments for **viral** infections and **liver** diseases

Several new therapeutic areas with goal of building multiple approaches in each

Hepatitis B Virus (HBV)



Potentially life-threatening liver infection caused by the hepatitis B virus

- In 2019, hepatitis B resulted in an estimated 820,000 deaths, mostly from cirrhosis and hepatocellular carcinoma (primary liver cancer)¹
- Current treatments rarely give true cures
 - **Interferon** is ~10% effective, but with side effects²
 - **Reverse-transcriptase inhibitors** effective at reducing viral load, but low cure rates (1% or lower) and treatment for life to improve cirrhosis or HCC outcomes³

HBV at a Glance	
US	850K – 2M people ⁴
Europe and European Economic Area	~4.7M people ⁵
Worldwide	~290M people ⁶

Sources: 1. <https://www.who.int/news-room/fact-sheets/detail/hepatitis-b> 2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5401664/>
 3. <https://pubmed.ncbi.nlm.nih.gov/30342034/> 4. <https://jamanetwork.com/journals/jama/fullarticle/2738558>
 5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5356432/> 6. <https://pubmed.ncbi.nlm.nih.gov/29599078/>

EDP-514: HBV Core Inhibitor

- A novel core inhibitor that displays potent anti-HBV activity at multiple points in the HBV lifecycle
- Granted Fast Track Designation by FDA

In vitro

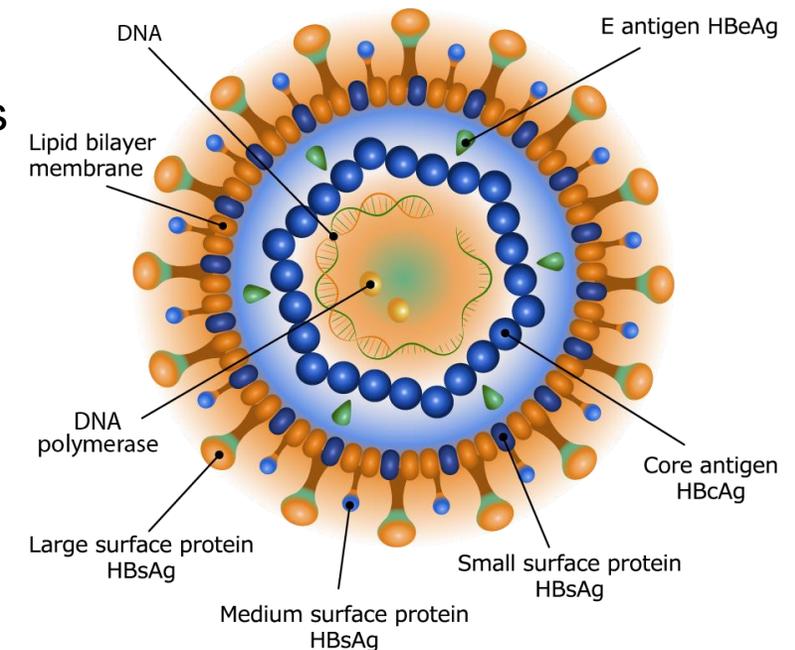
- Potent anti-HBV activity in HBV expressing stable cell lines
- Capable of preventing the establishment of cccDNA
- Pan-genotypic activity

In vivo

- Favorable tolerability and pharmacokinetic profile
- Over 4-log reduction in HBV viral titers with 12 weeks of treatment in a chimeric liver mouse model

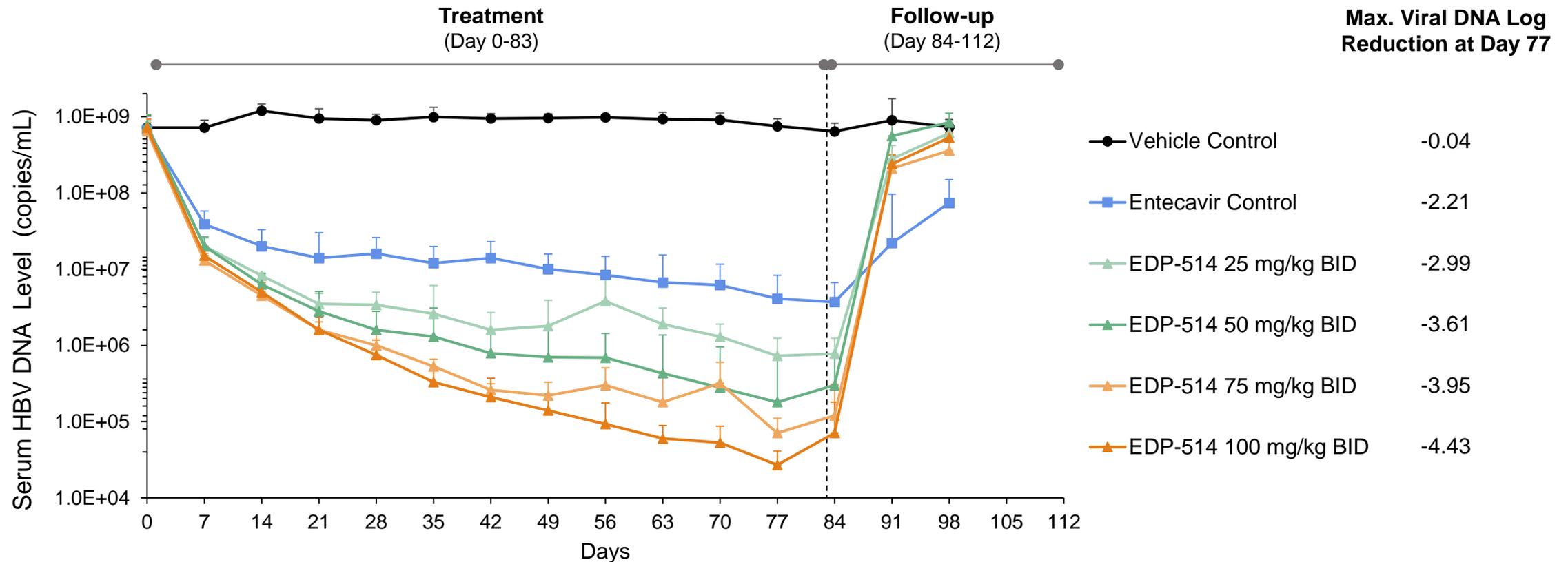
Phase 1a

- Healthy volunteer SAD/MAD
 - Generally safe and well tolerated for up to 14 days
 - All reported treatment emergent adverse events of mild severity
- Pharmacokinetics supportive of once-daily dosing with no food effect

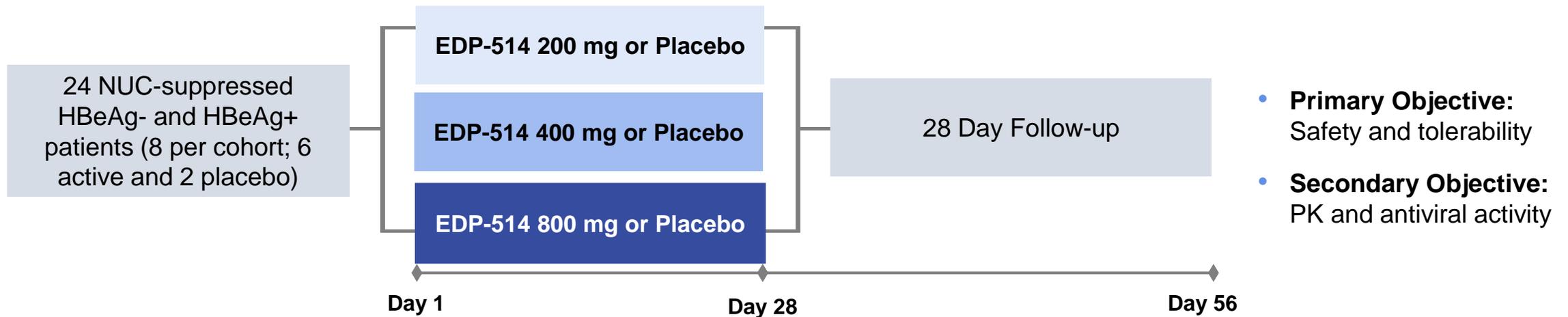


EDP-514: Efficacious in the Humanized Liver Mouse Model

- uPA/SCID mice were infected with genotype C HBV and dosed with EDP-514 for 12 weeks



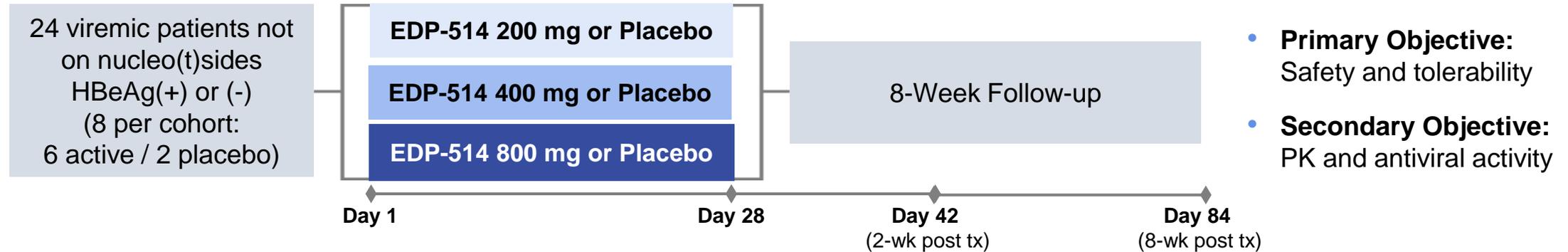
EDP-514 Phase 1: Positive Data in NUC-Suppressed Patients



Positive data from three dose cohorts: 200 mg, 400 mg and 800 mg of EDP-514

- EDP-514 was safe and well-tolerated in NUC-suppressed subjects at all doses up to 28 days
- Pharmacokinetics supportive of once-daily dosing, with trough concentrations up to ~20-fold the $paEC_{50}$
- Mean reduction in HBV RNA of up to ~1 log compared with 0.2 log in placebo
 - Maximum reduction of 2.3 log (HBeAg-) and 2.8 log (HBeAg+) was observed in patients receiving EDP-514 as compared with 1.2 log in placebo

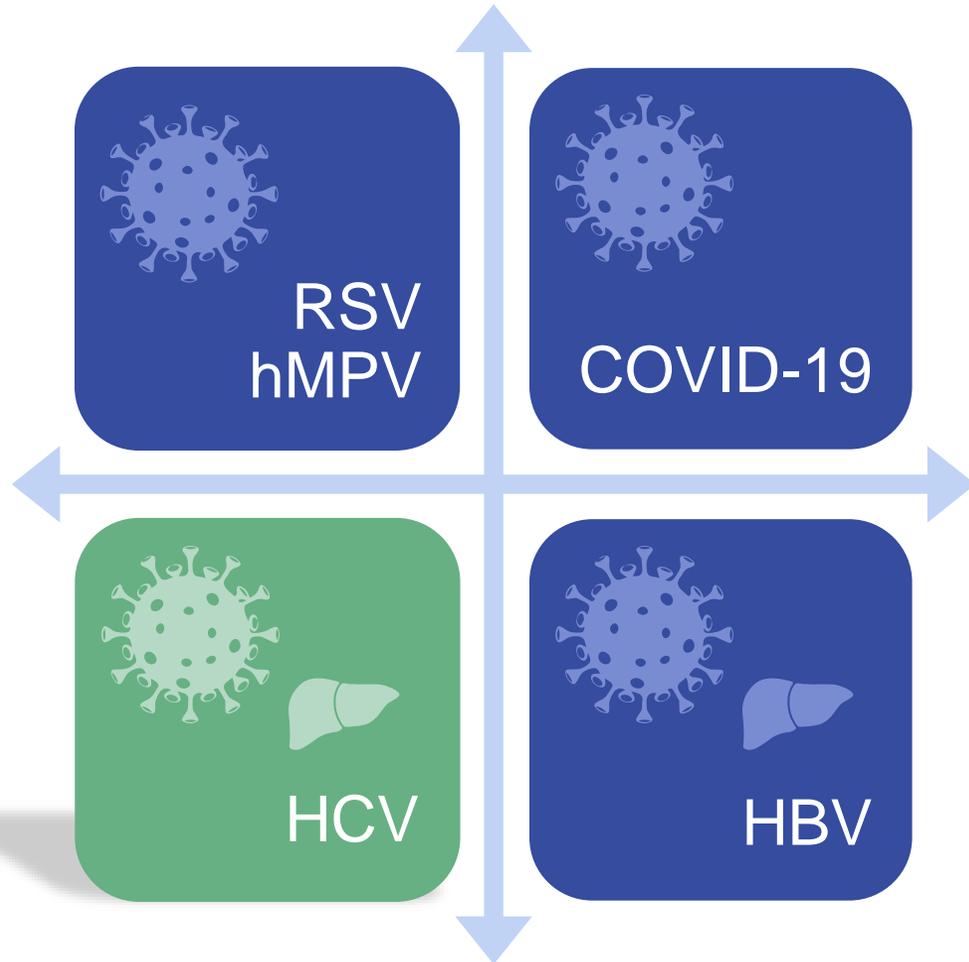
EDP-514 Phase 1b: Positive Data in Viremic HBV Patients



Positive data from three dose cohorts: 200 mg, 400 mg and 800 mg of EDP-514

- EDP-514 was safe and well tolerated in viremic chronic HBV patients dosed for 28 days
 - No severe or serious TEAEs; no liver enzyme elevations or other clinically significant laboratory abnormalities
 - Safety profile remains consistent across healthy subjects and NUC-suppressed patients
- Pharmacokinetics supportive of once-daily dosing, with trough concentrations up to ~20-fold the paEC₅₀
- Mean reduction in HBV DNA of 2.9, 3.3, 3.5 log in the 200 mg, 400 mg, and 800 mg groups compared with 0.2 log in placebo
- Mean reduction in HBV RNA of 2.9, 2.4, 2.0 log in the 200 mg, 400 mg, and 800 mg groups compared with 0.02 log in placebo

Our Therapeutic Focus

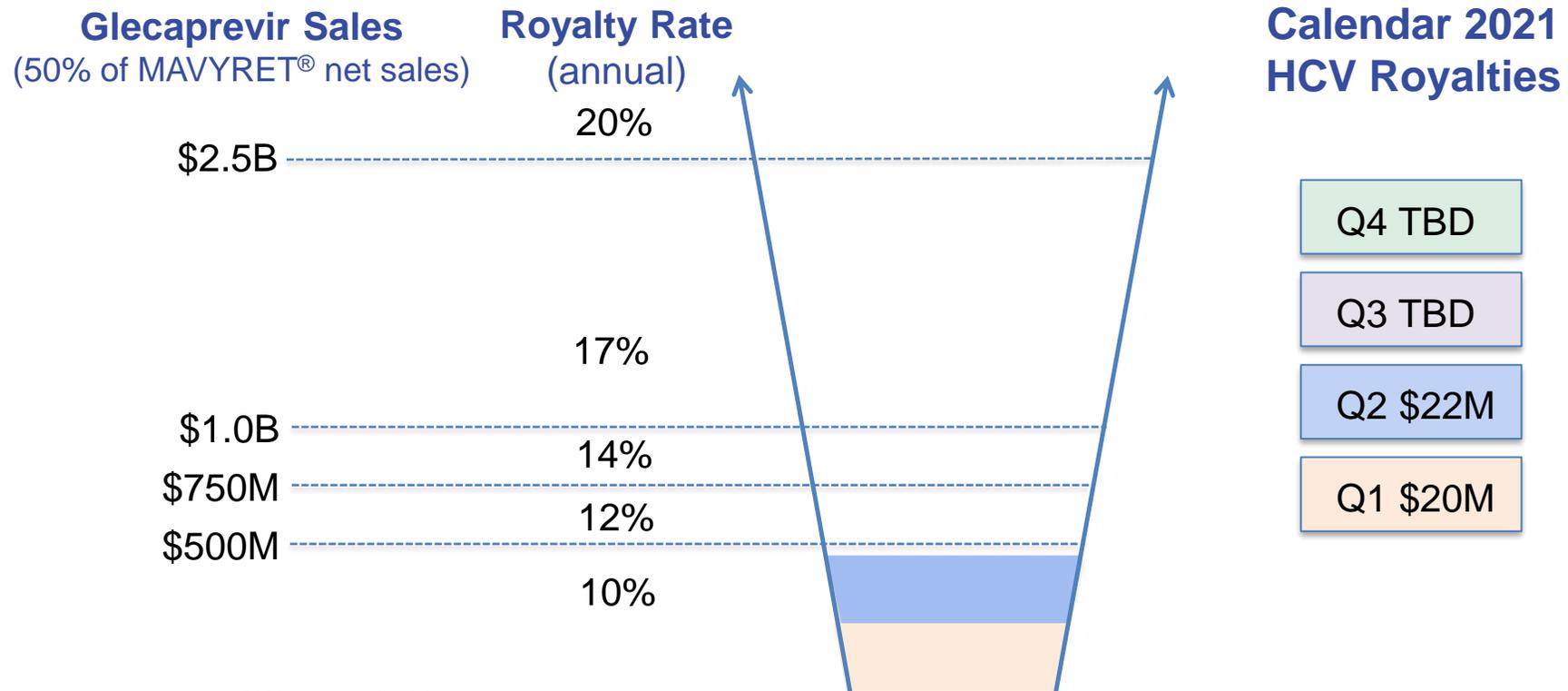


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Glecaprevir: Our Licensed Protease Inhibitor for Hepatitis C Virus

Product	Regimen	Enanta Asset	Economics*
 glecaprevir/pibrentasvir <small>100 mg/40 mg tablets</small>	2-DAA (ABBV)	glecaprevir (PI)	Double-digit royalty on 50% of net sales



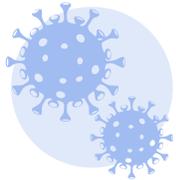
*Enanta also receives royalties on paritaprevir sales (30% of VIEKIRA 3DAA sales, same tiers)

Financial Highlights

(\$ In millions)	Fiscal Year Ended Sept. 30, 2020	Fiscal Quarter Ended June 30, 2021
Total Revenues	\$122.5	\$21.6
R&D Expenses	\$136.8	\$47.0
G&A Expenses	\$27.4	\$8.5
Net Income (Loss)	\$(36.2)	\$(24.0)
Net Income (Loss) per Diluted Common Share	\$(1.81)	\$(1.19)
Balance Sheet		
Cash, Cash Equivalents and Marketable Securities	\$419.3	\$372.5

Key Catalysts 2021

Virology Respiratory



RSV N-Inhibitor EDP-938

- ✓ Initiated RSVTx in Q4 2020
- ✓ Initiated RSVPEDs in Q1 2021
- Complete enrollment for RSV during Northern Hemisphere winter season

SARS-CoV-2

- ✓ Nominated EDP-235 for SARS-CoV-2 infection

hMPV and RSV L-inhibitor

- Nominate one clinical development candidate

Virology Liver



HBV Core Inhibitor EDP-514 and HBV RNA Destabilizer EDP-721

- ✓ EDP-514 Phase 1b in NUC-suppressed HBV patients; data reported in Q4 2021
- ✓ EDP-514 Phase 1b in viremic HBV patients; data reported in Q4 2021

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