



Enanta
Pharmaceuticals
Great Chemistry Cures

Corporate Presentation

November 21, 2022



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.

Please refer to the risk factors described or referred to in “Risk Factors” in Enanta’s most recent Quarterly Report on Form 10-Q, and other periodic reports filed with the Securities and Exchange Commission. Enanta cautions investors not to place undue reliance on the forward-looking statements contained in this presentation. These statements speak only as of the date of this presentation, and Enanta undertakes no obligation to update or revise these statements, except as may be required by law.

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

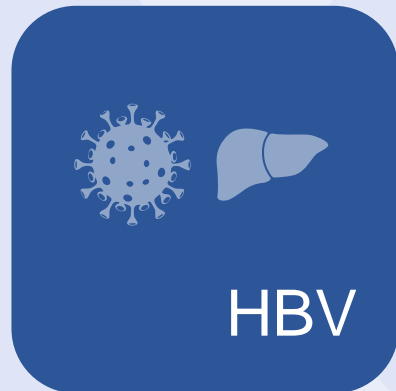
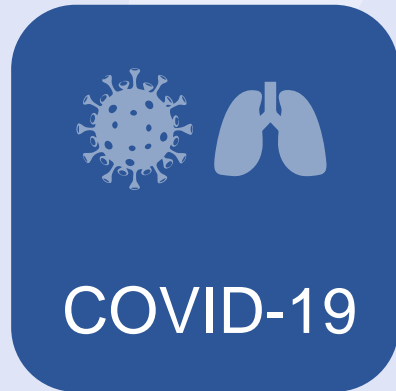
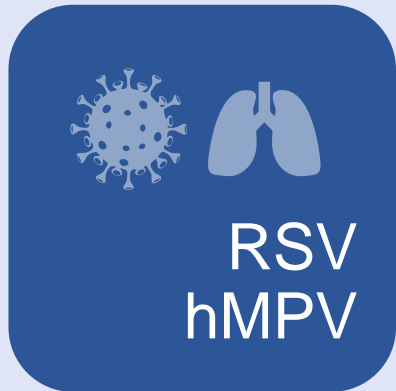
- RSV:** Phase 2 study in pediatric patients (RSVPEDs) ongoing
Phase 2b study in adult stem cell transplant patients (RSVPTx) ongoing
Phase 2b study in high-risk adults ongoing
Phase 1 study in healthy volunteers with EDP-323 ongoing
- HBV:** Two Phase 1b studies completed
- COVID-19:** Phase 2 study ongoing

Proven Track Record of Success

Glecaprevir – HCV protease inhibitor in MAVYRET[®]/MAVIRET[®]
\$86.2M in fiscal 2022 royalties on HCV regimens

Strong Balance Sheet

Strong balance sheet and royalties to fund robust pipeline
\$278.5M in cash at September 30, 2022




Our Therapeutic Focus

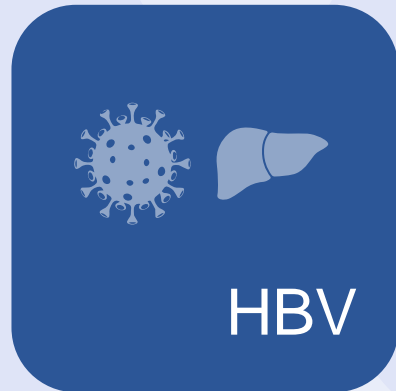
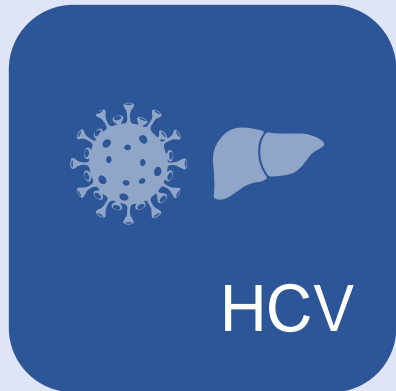
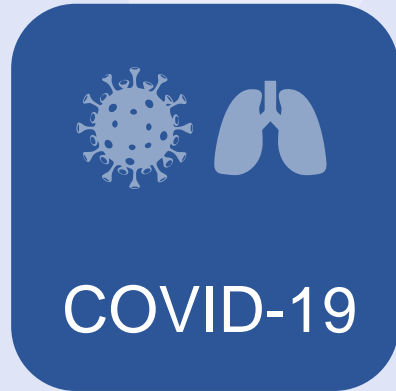
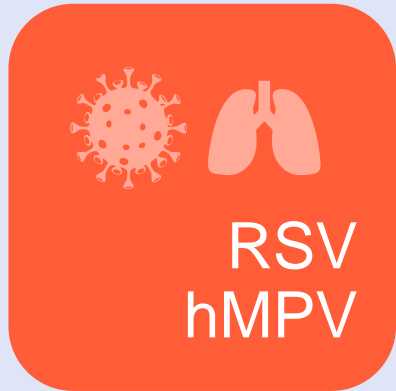
Leveraging our core strength in Hepatitis C to become a leader in oral treatments for **viral** infections

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			RSVPEDs			
			EDP-938			RSVTx			
			EDP-938			RSVHR			
		L-Protein Inhibitor	EDP-323						
	hMPV	Non-Fusion Inhibitor							
	COVID-19	Protease Inhibitor	EDP-235			SPRINT			
Discovery or Preclinical	RSV, HBV, COVID-19, 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.).

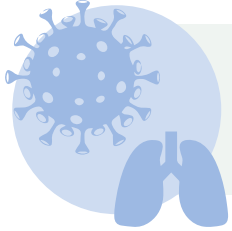


Our Therapeutic Focus

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

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.

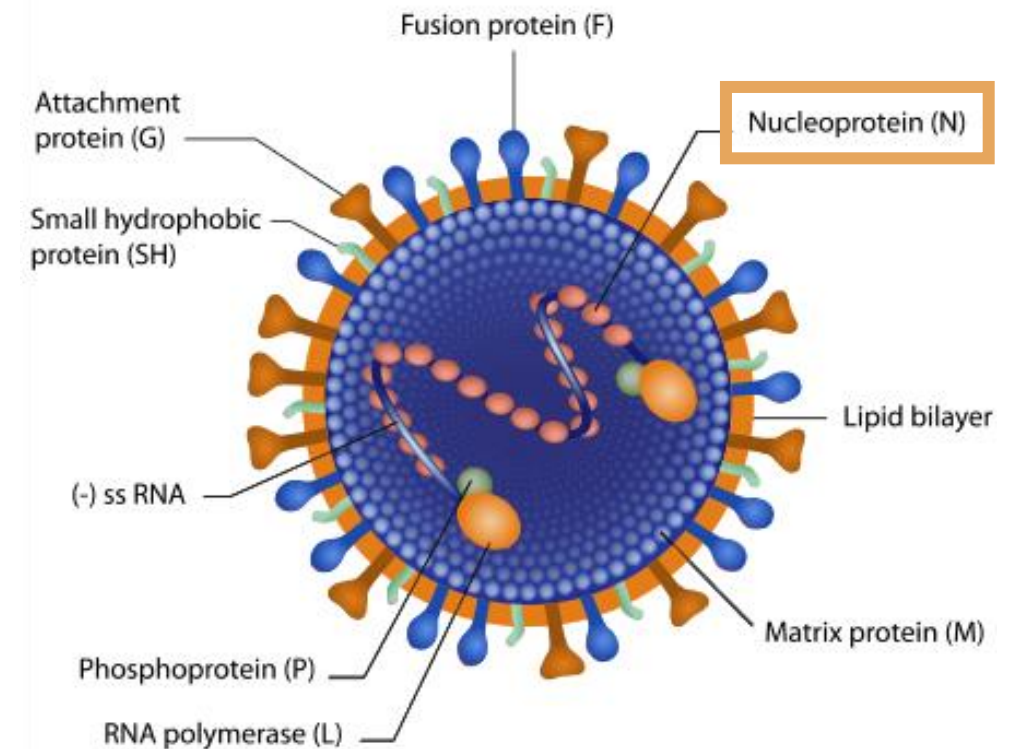
Higher risk populations for severe illness:

- 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	Adults > 65 years ²
33M global cases	
3M global hospitalizations	177K U.S. hospitalizations
101K global deaths	14K U.S. deaths

EDP-938: N-Protein Inhibitor for RSV

- EDP-938 is the only N-inhibitor in later stage clinical development
 - 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 efficacy data in non-human primate model



EDP-938: Summary of Data Across Completed Clinical Studies

- Safety and Pharmacokinetic Summary
 - Generally safe and well-tolerated; AEs infrequent, generally mild, and resolved in follow-up
 - No serious or severe AEs
 - Consistent safety profile observed in approximately 500 subjects exposed to date
 - Mean Ctrough concentrations were approximately >20-40x higher than EC90
- Efficacy Summary
 - Phase 2a challenge study: highly statistically significant ($p < 0.001$) reductions in RSV viral load and clinical symptoms compared to placebo after 5 days of treatment
 - RSVP study in otherwise healthy adults with community-acquired, mild, self-resolving RSV
 - Did not meet primary endpoint of clinical symptom reduction or secondary antiviral endpoints
 - Statistically significant percent of subjects achieved undetectable RSV RNA at end of treatment
 - Although treated within 48 hours of symptom onset, viral load and symptoms had already peaked and were declining, indicating infection resolves quickly in this otherwise healthy population

EDP-938: Potential to be the Leading Antiviral Treatment for RSV

Properties		EDP-938	Ziresovir/ AK-059	Sinsunatovir/ RV521 ¹
Mechanism		N inhibitor	Fusion inhibitor	Fusion inhibitor
Pre-clinical Effectiveness After Infection		Yes	No	No
Clinical Efficacy (challenge study ⁴)	Viral Load Reduction ²	75% (p<0.001)	NA	55% (p=0.007)
	Symptoms ³	71% (p<0.02)	NA	71% (p=0.018)
Resistance Barrier		High	Low	Low
Dosing Frequency		5 days; 800mg QD	5 days; BID	5 days; 200mg BID
Stage of Development		Global Phase 2	Asia Phase 3	Global Phase 2

Only includes compounds in development with clinical data in patients

1. [DeVincenzo et al, 2020; AAC; 64\(2\)](#); 2. % reduction in viral load (VL) area under the curve (AUC) as measured by qPCR; 3. % reduction in total symptom score (TSS) AUC; 4. Data from selected dose moving forward

NA = not available; challenge study not performed

EDP-938 Development Plans: Treatment for Patients at High-Risk for Severe RSV Infection

High-risk populations have reduced RSV immunity, resulting in a higher and longer duration of viral load and greater disease severity, allowing a bigger window to observe benefit

Goal: Treat patients at high-risk for developing severe infection leading to hospitalization or death, populations with the most significant unmet need



Infants and young children



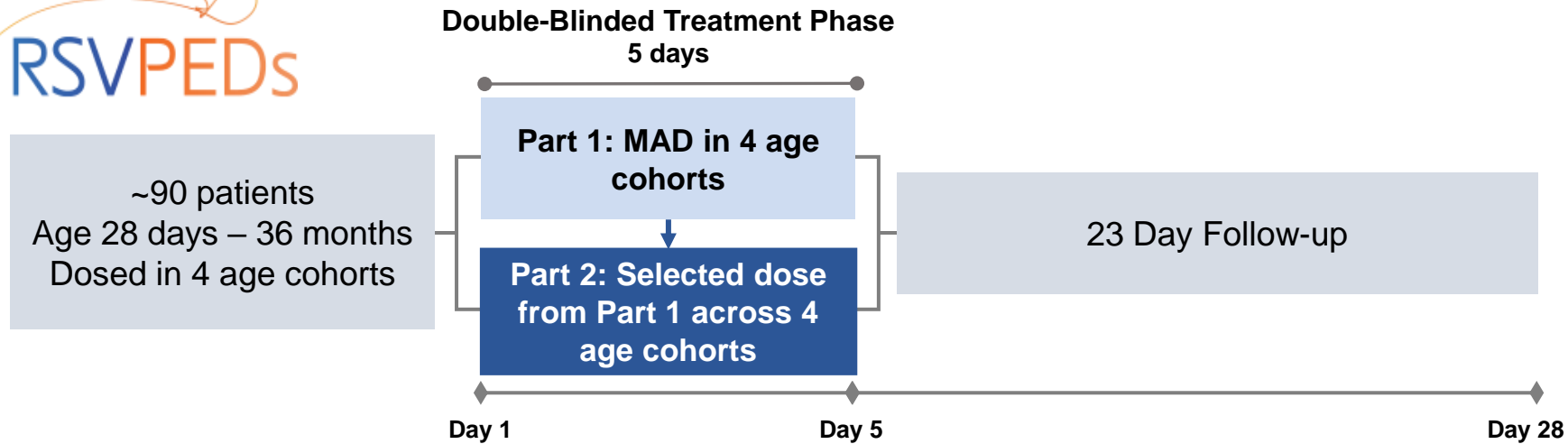
Immunocompromised
(e.g.; HSC, lung transplant)



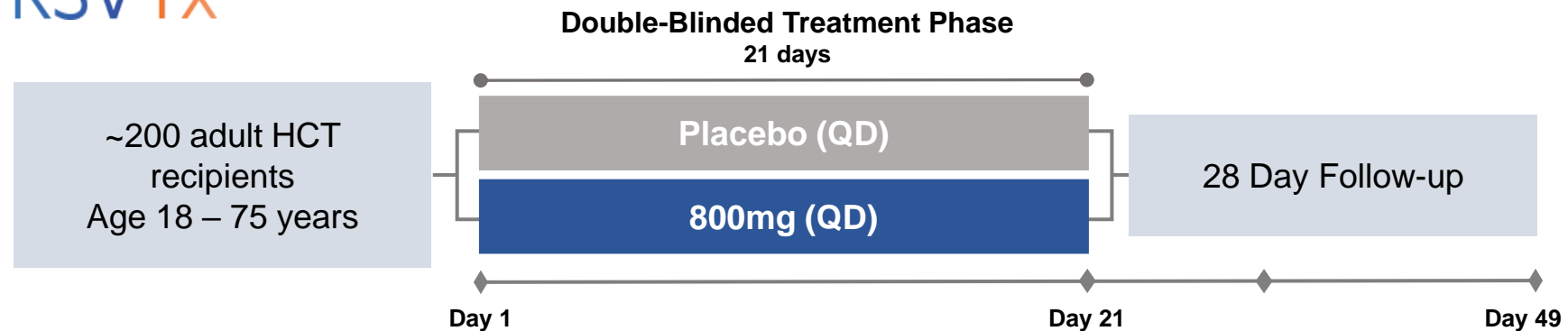
Elderly

Chronic heart or lung disease
(e.g. COPD, CHF, asthma)

Ongoing Phase 2 Clinical Trials: RSV PEDs and RSV Tx



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



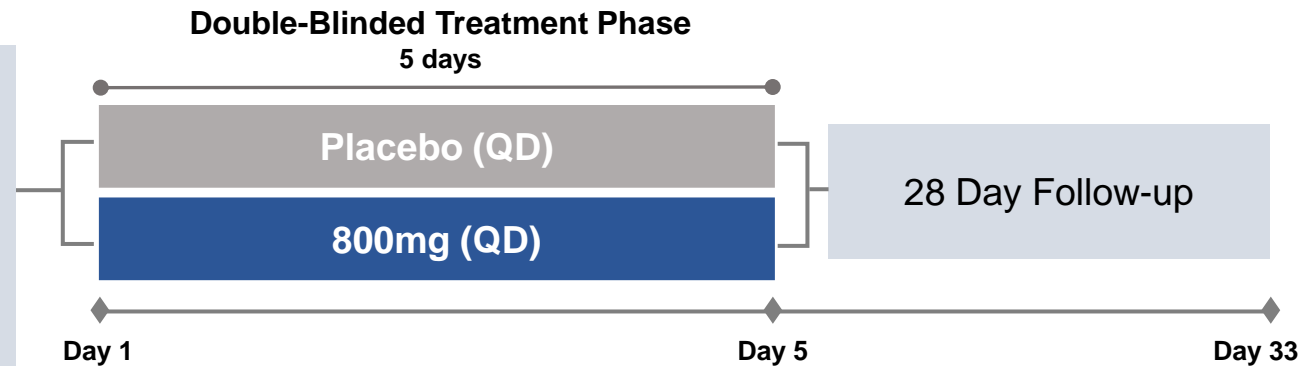
- **Primary Objective:** Effect of EDP-938 on development of LRTC in HCT subjects with acute RSV URTI
- **Secondary Objectives:** Viral load, progression to respiratory failure or all-cause mortality, PRO, PK and safety

Newest Phase 2 Study: RSVHR (High Risk Populations)



~180 adults with at least one of the following:

- COPD
- Congestive heart failure
- Asthma*
- Age $\geq 65^*$

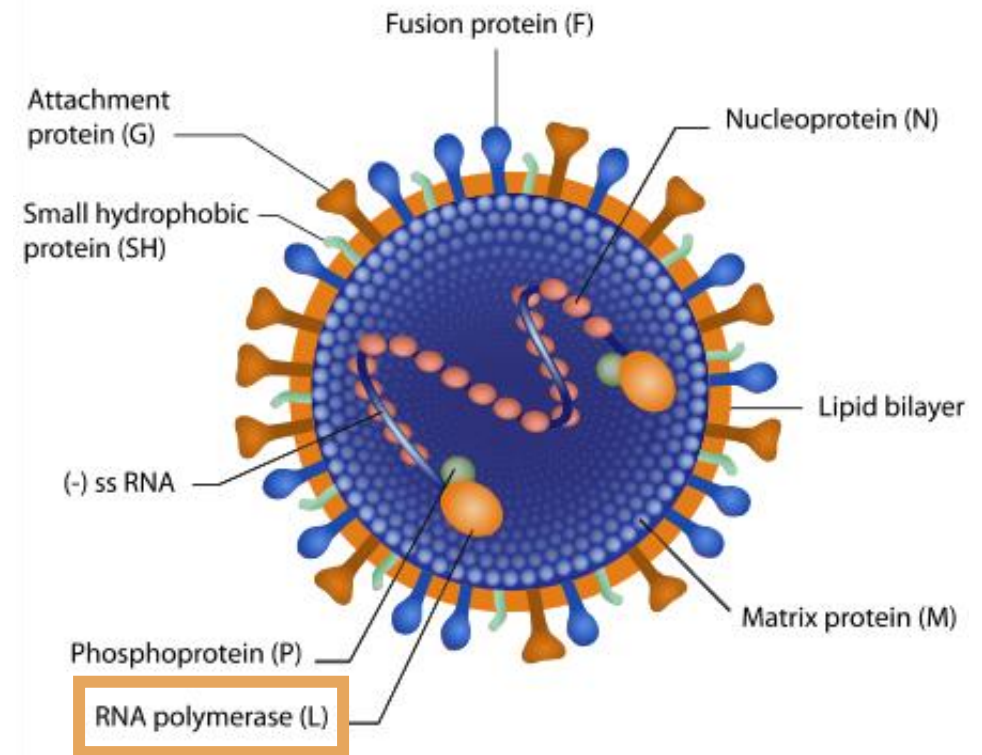


- **Primary Objective:**
Time to resolution of RSV LRTD symptoms as assessed by RiiQ symptom scale through Day 33
- **Secondary Objectives:**
PROs, MAVs, viral load, antibiotic use, bronchodilator use, corticosteroid use, hospitalization, ICU, mechanical ventilation, all cause mortality, pharmacokinetics and safety

*The total proportion of subjects either ≥ 65 years of age or patients with asthma combined will be capped at 20%.

EDP-323: RSV L-Protein Inhibitor

- Novel, oral, selective direct-acting antiviral targeting the RSV L-protein
 - RSV L-protein is a viral RNA-dependent RNA polymerase that contains multiple enzyme activities required for RSV replication
- Potential to be used alone or in combination with other classes of RSV inhibitors, such as EDP-938
 - Additive to synergistic with F-, N-, L-inhibitors and ribavirin
 - Not expected to have cross resistance with other mechanisms
- Nanomolar potency against RSV-A and RSV-B
- Phase 1 study initiated in 4Q 2022



EDP-323 is a Potent Inhibitor of RSV Replication *In Vitro* With Excellent Preclinical Pharmacokinetics

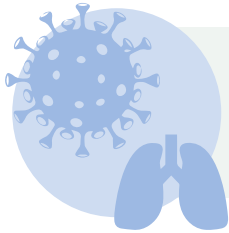
- Sub-nanomolar inhibition of RSV replication in a range of cell types
 - Active against both major RSV subtypes

Virus	Cell Type	EC ₉₀ (nM)
RSV-A Long	pHAEC ALI	0.27
RSV-B VR-955	pHAEC ALI	0.33
RSV-A Long	HBEC	0.16

RT-qPCR readout
pHAEC ALI: primary human airway epithelial cells in air-liquid interface culture
HBEC: human bronchial epithelial cells
50% cytotoxic concentration (CC50) at 5 days = 17,000 – 29,000 nM

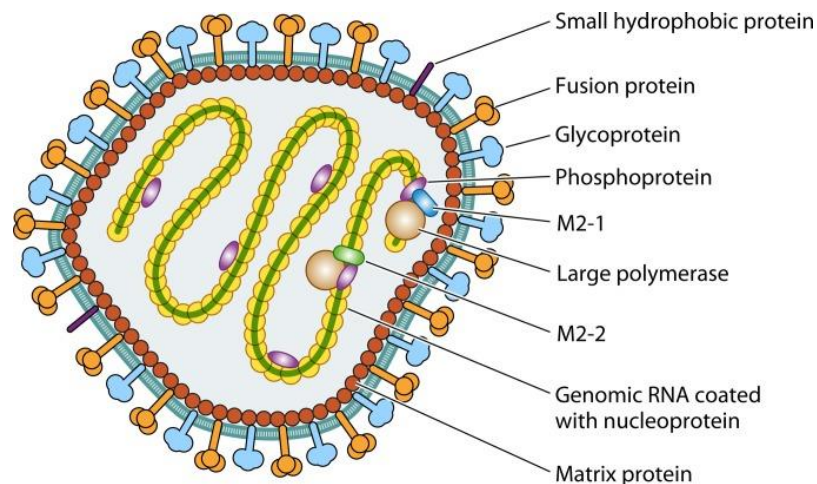
- Protects mice in a dose-dependent manner from RSV infection as quantified by both virological and pathological endpoints
- Well-absorbed with good plasma exposure across multiple preclinical species
- High permeability/absorption potential in humans

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

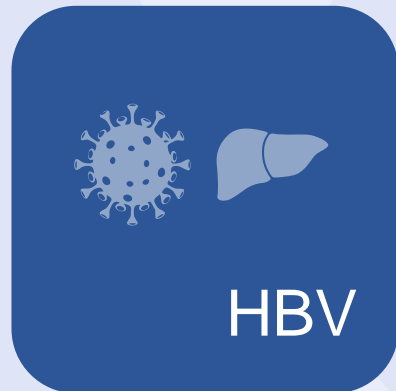
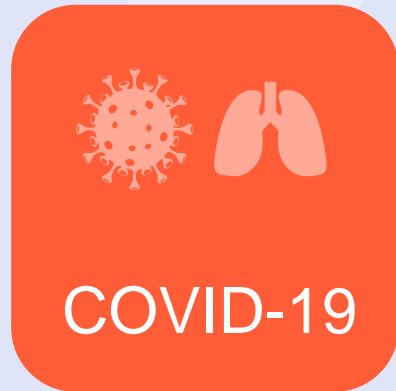
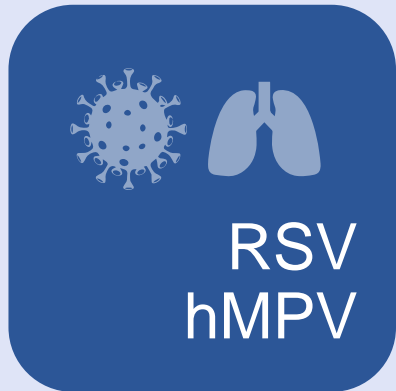


hMPV at a Glance¹

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



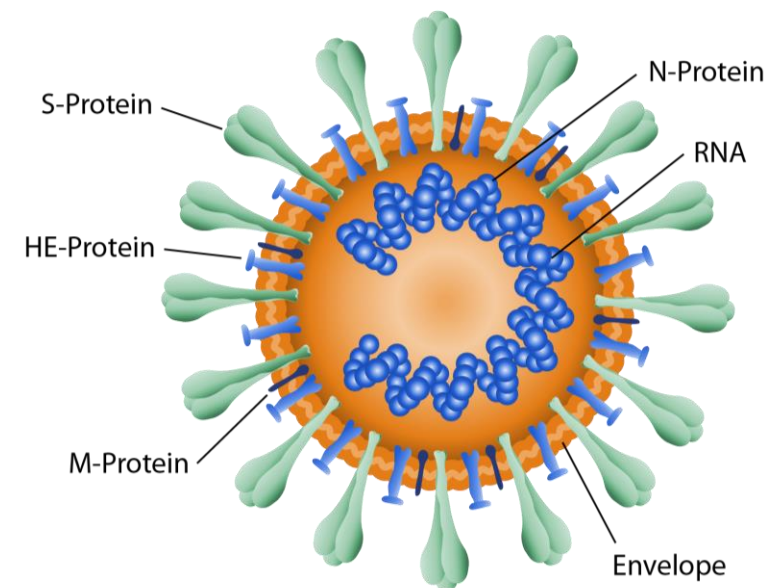
Our Therapeutic Focus

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

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

EDP-235: Oral Protease Inhibitor 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 ($IC_{50} = 5.8 \text{ nM}$)
- Potent and selective inhibition of SARS-CoV-2 replication in multiple cellular models
- Activity retained against proteases from SARS-CoV-2 variants, including Omicron
- 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) and long half-life (16 hours)
 - Good target tissue distribution (e.g. lung to plasma AUC ratio >4)
 - Supported by Phase 1 PK data at 200mg and 400mg QD
- Phase 2 study initiated in 4Q 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)	B.1.1.529, BA.2, BA.5, BA.2.75* (P132H) [Omicron]	4.1 ± 0.8
		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.1.351.2 (K90R/A193V) [Beta]	5.4 ± 1.0
		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
Live Virus	Vero E6 +PGPi, CPE readout (EC ₉₀)	A [Original]	11 ± 8
		B.1.617.2 [Delta]	9.1 ± 2.9
		B.1.1.529 [Omicron]	5.1 (n=1)

FRET: fluorescence resonance energy transfer, P-gpi: P-glycoprotein inhibitor CP-100356 (2 μM), CPE: cytopathic effect

Values average of replicate experiments except where noted

*Omicron subvariant colloquially known as 'Centaurus'

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

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

Preclinical Properties		EDP-235 ¹	Nirmatrelvir ²	PBI-0451 ³	Ensitrelvir ⁴	Molnupiravir ⁵	AT-527 ⁶
Mechanism		Protease	Protease	Protease	Protease	Polymerase	Polymerase
Potency (nM)*	Enzyme IC ₅₀	5.8	19	25	13	n/a	n/a
	Vero Cell EC ₅₀	5.1	75	48	69 (Delta)	1410**	n/a
	Vero Cell EC ₉₀	11	155	n/a	n/a	n/a	470*** (ln pHAEC)
Oral Bioavailability ⁷		95%	34 – 50%	n/a	97%	36 – 56%	n/a
Lung Penetration ⁸		4.1	0.8 ⁹	~1	0.7 ⁹	1.8	0.8
Projected Efficacious Dose		200 or 400 mg QD	300 mg/100 mg ritonavir BID	700 mg BID	375 mg (D1)/125 mg (D2-5) QD	800 mg Q12h	550mg BID

1. Jiang et al., ISIRV Poster #120, Oct 19, 2021

2. Owen et al., *Science* November 2021; Owen et al. ACS Spring 2021 meeting; EUA fact sheet for healthcare providers

3. Pardes ICAR [Presentation](#) March 2022

4. Tachibana, et al., ISIRV oral presentation, Oct 20, 2021; Unoh, et al., bioRxiv 2022; Sasaki, et al., bioRxiv 2022; Yotsuyanagi, et al., ECCMID oral presentation, Apr 24, 2022

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 1Q2022 earnings presentation; Atea 2Q2022 earnings presentation

7. Oral bioavailability in rats for EDP-235, nirmatrelvir, and Ensitrelvir; in mice for molnupiravir

8. AUC lung to plasma ratio in rats (EDP-235, nirmatrelvir, Ensitrelvir), mice (molnupiravir); C12 lung to plasma ratio in humans for AT-527

9. Data for nirmatrelvir and Ensitrelvir generated by Enanta

*All potency values versus ancestral (A) lineage unless indicated

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

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

pHAEC: primary human airway epithelial cells

n/a: not available

EDP-235: Phase 1 Safety, Tolerability and Pharmacokinetics

- Randomized, double-blind, placebo-controlled Phase 1 study in healthy volunteers (n=72)
 - Single and multiple ascending doses (SAD: 50 – 800mg and MAD: 200 – 800mg once-daily)
- Generally safe and well-tolerated up to 400mg for up to 7 days
 - Majority of AEs were mild, with the most frequent being headache and GI related symptoms
 - Three subjects discontinued due to an AE: one moderate headache in the 400mg fasted cohort, one severe headache in the 800mg fed cohort and one grade 3 ALT/grade 2 AST elevation in the 800mg fed cohort
- Pharmacokinetics: 200mg or 400mg taken once-daily with food achieved target exposures

Measured Plasma Drug Multiples*

Variant	200mg QD	400mg QD
Alpha	3x	6x
Omicron	7x	13x

Predicted Lung Drug Multiples*

Variant	200mg QD	400mg QD
Alpha	12x	24x
Omicron	28x	52x

- Exposure increased proportionally with increasing single and multiple doses
- Consistent half-life ranging from 13 to 22 hours
- Exposure enhanced with food administration regardless of fat content

*Multiples by which mean trough drug plasma levels at steady state are higher than protein adjusted EC90 as measured in Vero cells

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

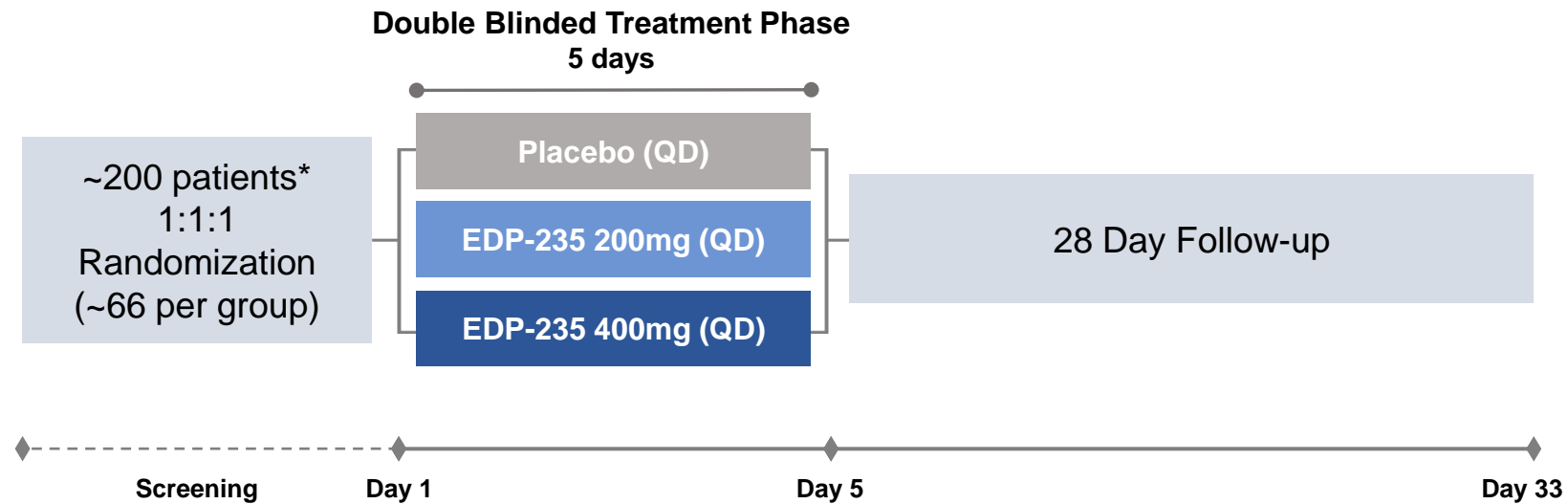
- Potent antiviral activity *in vitro* against SARS-CoV-2 variants, including Omicron
- Generally safe and well-tolerated up to 400mg dose up to 7 days
- Efficacious dose of 200mg or 400mg once-daily, without the need for boosting (e.g. ritonavir)
 - 200mg: plasma levels 3x and 7x higher than EC₉₀ of Alpha and Omicron variants, respectively
 - 400mg: plasma levels 6x and 13x higher than EC₉₀ of Alpha and Omicron variants, respectively
- Projected to have 4x higher drug levels in lung tissue compared to plasma
- Good distribution into other key target tissues* providing the potential to impact post-treatment rebound and/or possible sites of ongoing replication linked to long COVID

Emerging data supports convenient dosing regimen, targeting a one pill, once-a-day treatment active against COVID-19 variants of concern

SPRINT: SARS-Cov-2 PRotease INhibitor Treatment

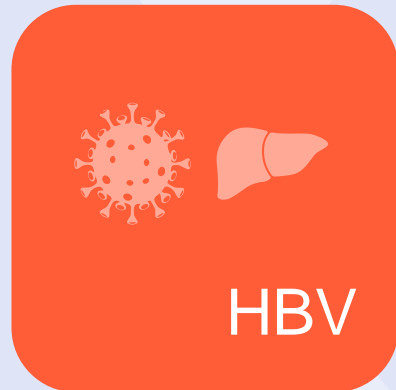
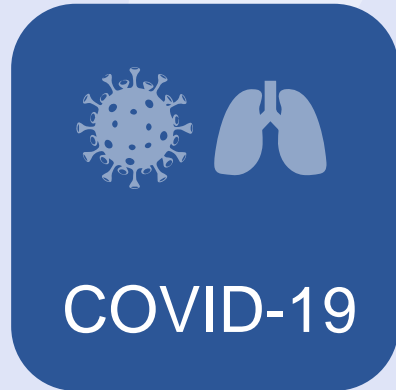
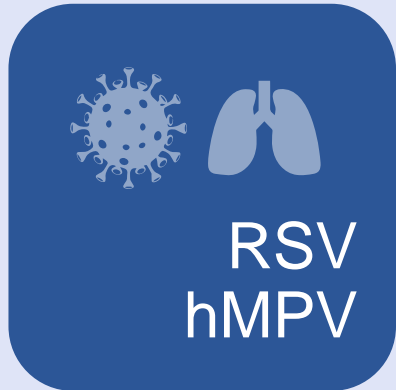
Phase 2 Study for EDP-235

SPRINT



* Non-hospitalized adults with mild or moderate COVID-19 and symptom onset within 5 days, who are not at increased risk for developing severe disease and have not been vaccinated or infected with SARS-CoV-2 less than 90 days of enrollment

- **Primary Objective:** Evaluation of safety and tolerability
- **Secondary Objectives:** Evaluation of virologic endpoints, clinical symptoms and outcomes, and pharmacokinetics

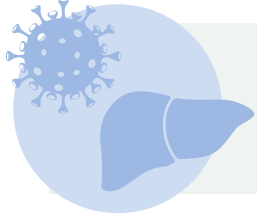


Our Therapeutic Focus

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

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

Hepatitis B Virus (HBV)



Potentially life-threatening liver infection

- 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	
U.S.	850K – 2M people ⁴
Europe and European Economic Area	~4.7M people ⁵
Worldwide	~290M people ⁶

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

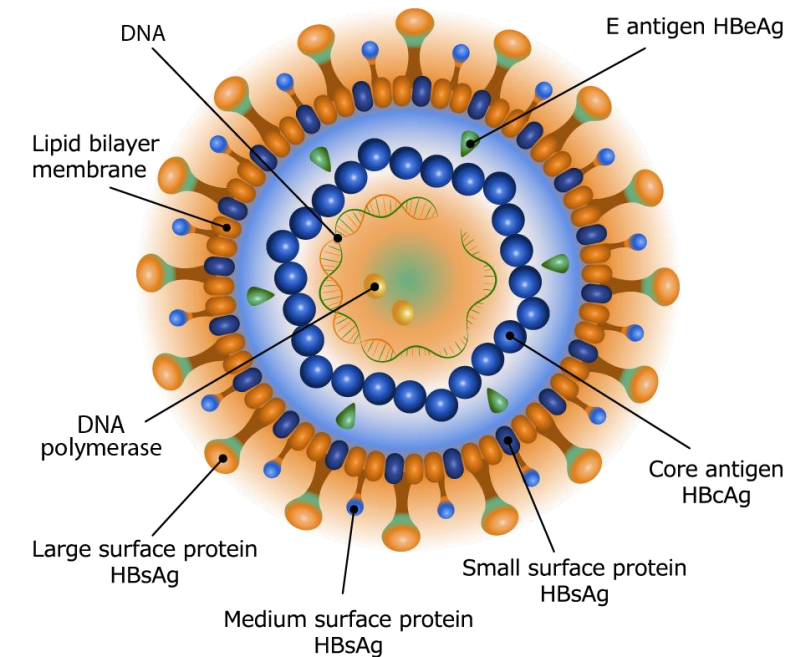
- Potent anti-HBV activity in HBV expressing stable cell lines
- Capable of preventing the establishment of cccDNA
- Pan-genotypic activity

In vivo

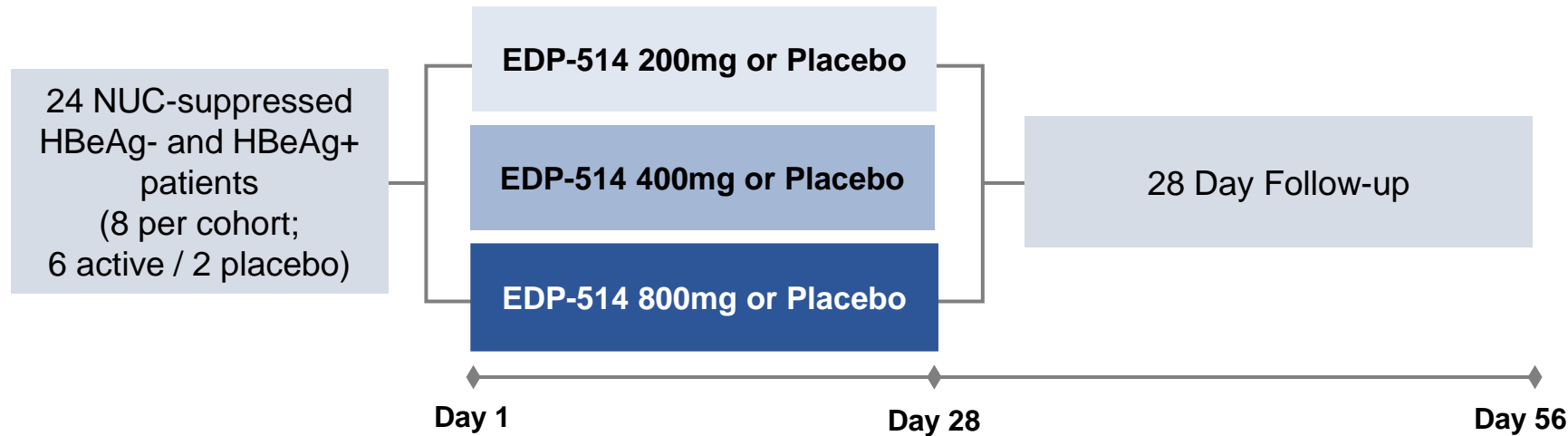
- Favorable tolerability and pharmacokinetic profile
- Over 4-log reduction in HBV viral titers with 12 weeks of treatment in a chimeric liver mouse model

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 Phase 1: Positive Data in NUC-Suppressed Patients

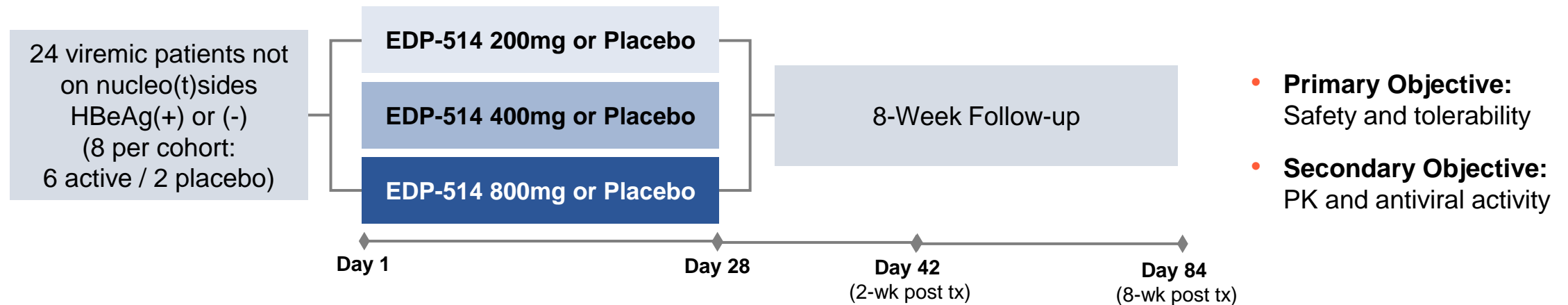


- **Primary Objective:** Safety and tolerability
- **Secondary Objective:** PK and antiviral activity

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

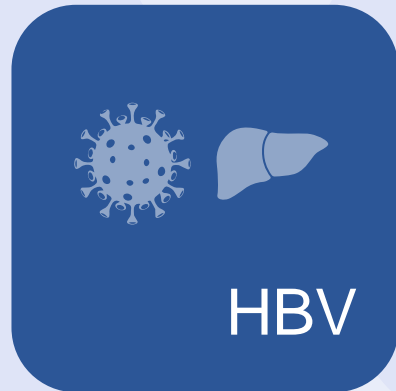
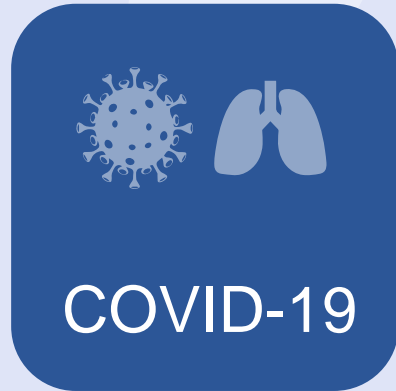
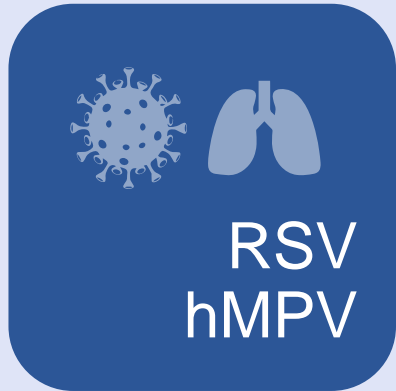
- EDP-514 was safe and well-tolerated in NUC-suppressed subjects at all doses up to 28 days
- Pharmacokinetics supportive of once-daily dosing, with trough concentrations up to ~20-fold the $paEC_{50}$
- Mean reduction in HBV RNA of up to ~1 log compared with 0.2 log in placebo
 - Maximum reduction of 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: 200mg, 400mg and 800mg 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 $paEC_{50}$
- Mean reduction in HBV DNA of 2.9, 3.3, 3.5 log in the 200mg, 400mg, and 800mg groups compared with 0.2 log in placebo
- Mean reduction in HBV RNA of 2.9, 2.4, 2.0 log in the 200mg, 400mg, and 800mg groups compared with 0.02 log in placebo



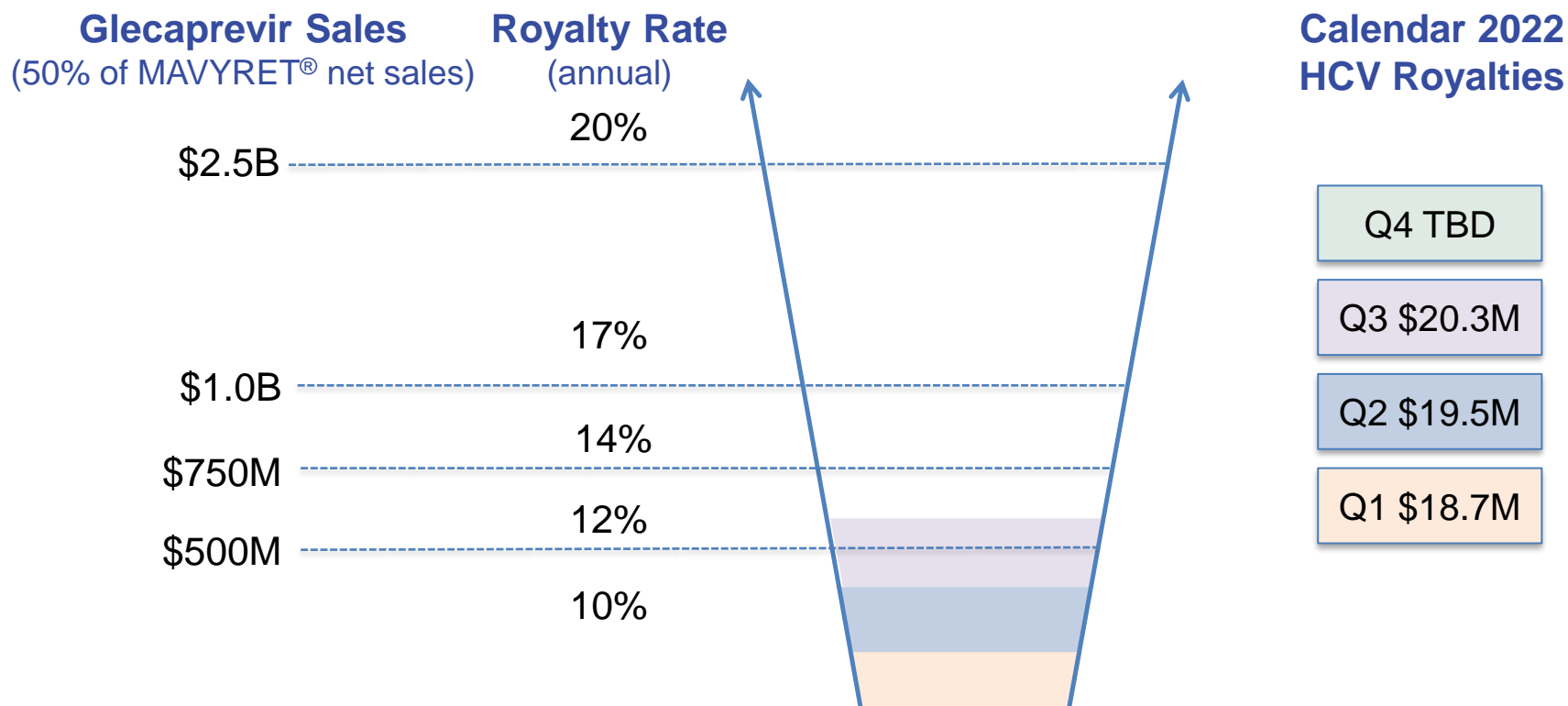
Our Therapeutic Focus

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

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

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



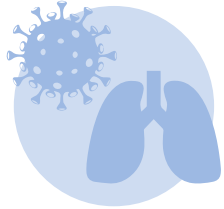
*Enanta also receives royalties on paritaprevir sales (30% of VIEKIRA 3DAA sales, same tiers)

Financial Highlights

(\$ In millions except per share amounts)	Fiscal Year Ended Sept. 30, 2022	Fiscal Quarter Ended Sep. 30, 2022
Total Revenues	\$86.2	\$20.3
R&D Expenses	\$164.5	\$34.8
G&A Expenses	\$45.5	\$12.6
Net Loss	\$(121.8)	\$(26.3)
Net Loss per Diluted Common Share	\$(5.91)	\$(1.27)
Balance Sheet		
Cash, Cash Equivalents and Marketable Securities	\$278.5	\$278.5

Key Catalysts 2022

Virology Respiratory



Respiratory Syncytial Virus

- ✓ Report topline data for RSVP Phase 2b study of EDP-938 in 2Q 2022
- ✓ Initiated Phase 2b study of EDP-938 in high-risk adults in 4Q 2022
- Continue recruitment for RSVPEDs and RSVTx studies of EDP-938
- ✓ Initiated Phase 1 study of EDP-323 in 4Q 2022

SARS-CoV-2

- ✓ Report preliminary data for Phase 1 study of EDP-235 in July 2022
- ✓ Initiated Phase 2 study of EDP-235 in 4Q 2022

Human Metapneumovirus

- Nominate development candidate in 2023

Virology Liver



Hepatitis B Virus

- Select third mechanism for HBV combination regimen with EDP-514



Enanta

Pharmaceuticals

www.enanta.com

