Interim Results from Phase 1b Clinical Studies of Long-Acting Helicase-Primase Inhibitor Candidates ABI-1179 and ABI-5366 in Recurrent Genital Herpes

December 8, 2025

Nasdaq: ASMB

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ABI-5366 and ABI-1179 – Helicase-Primase Inhibitors for Recurrent Genital Herpes

Positive Interim Phase 1b Results for Two Promising Long-Acting Candidates

August 2025

- **ABI-5366 weekly** cohort B2 **exceeds Phase 1b expectations** with
  - 94% reduction in HSV-2 shedding (p<0.01) vs placebo
  - 97% reduction in virologically confirmed lesion rate (p<0.05) vs placebo[1]

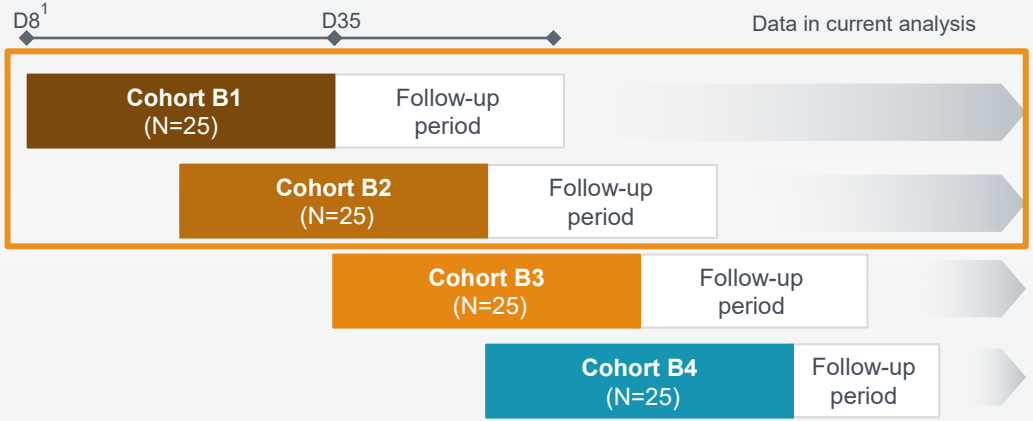
Results Released Today

- **ABI-1179 weekly** cohort B1 **exceeds Phase 1b expectations** with
  - 98% reduction in HSV-2 shedding (p<0.01) vs placebo
  - 92% reduction in virologically confirmed lesion rate (p<0.01) vs placebo
- **ABI-5366 weekly** cohort B1/B2 **unblinded** safety data released
- **ABI-5366 monthly** cohort B3 **shows potent antiviral activity**
  - 76% reduction in HSV-2 shedding (p<0.01) vs placebo
  - 88% reduction in virologically confirmed lesion rate (p=0.01) vs placebo

1. Overall lesion rate presented in August 2025; updated today to virologically confirmed lesion rate

ABI-1179-101 Phase 1b Study Design

- **Double-blind, placebo-controlled sequential cohorts**
- **All participants seropositive for HSV-2 with recurrent genital herpes**
- **Each cohort with 20 patients receiving ABI-1179 and 5 patients receiving placebo**



COHORT	REGIMEN	WEEKLY DOSE
B1	Weekly	50mg
B2	Weekly	20mg
B3	Weekly	10 mg
B4	TBD	TBD

KEY EFFICACY ASSESSMENTS

- Anogenital swabs (Day 8-35); e.g., viral shedding rate
- Daily diary of symptoms; e.g., days with lesions

DATA IN CURRENT ANALYSIS

- Diary data through D35
- 100% Shedding data
- Safety data through Day 57

Interim ABI-1179 Phase 1b data as of November 25, 2025
1. Dosing begins on Day 1 with swab and diary evaluations beginning on Day 8

ABI-1179 Phase 1b:
Baseline Demographics and Disease Characteristics

BASELINE DEMOGRAPHICS AND DISEASE CHARACTERISTICS	ABI-1179 20mg weekly/PBO (N=24)	ABI-1179 50mg weekly/PBO (N=25)
Age, median (range)	40 (24-61)	40 (23 – 60)
Male, N (%)	13 (54%)	7 (28%)
Race, N (%)		
White	21 (88%)	23 (92%)
Black/African American	0	1 (4%)
Native Hawaiian/Pacific Islander	0	3 (12%)
Other	3 (13%)	2 (8%)
BMI, median (range)	25.4 (20.1 – 30.2)	26.7 (18.9 – 31.4)
Years since HSV Diagnosis, median (IQR)	6.9 (3.2 – 17.3)	8.0 (4.6 – 10.6)
Number of Lesions in past 12 months or prior to suppressive treatment, median (IQR)	5.5 (5.0 – 6.0)	6.0 (5.0 – 7.0)
Suppressive Treatment at Screening, N (%)	18 (75%)	20 (80%)

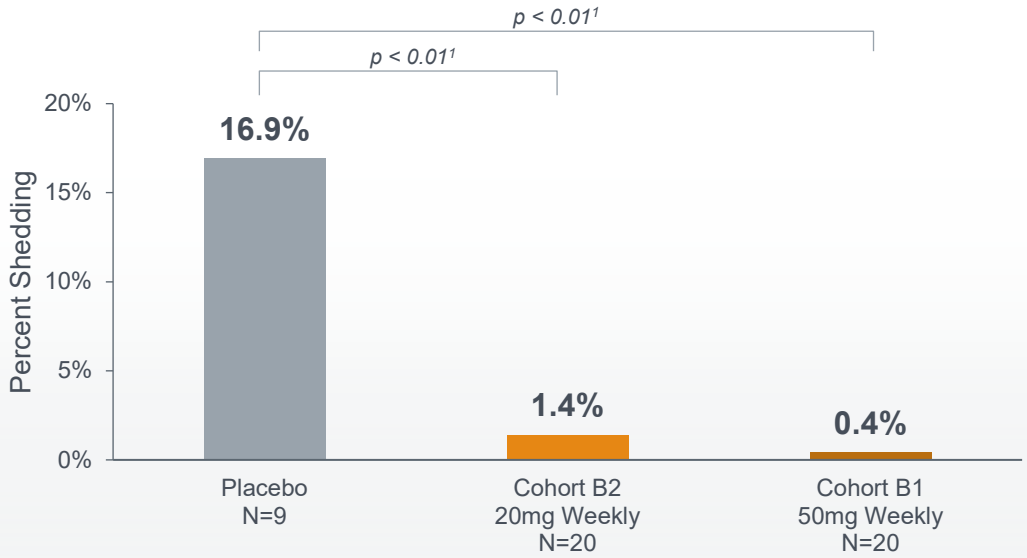
ABI-1179 Phase 1b:
Safety Summary – Adverse Events Cohorts B1 & B2

PARAMETER	ABI-1179 20mg weekly/PBO N=24	ABI-1179 50mg weekly/ PBO N=25
Subjects with any Treatment Emergent Adverse Events (TEAE) (max grade), N (%)	17 (71%)	23 (92%)
Grade 1, N (%)	12 (50%)	9 (36%)
Grade 2, N (%)	5 (21%)	13 (52%)
Grade 3, N (%)	0	1 (4%)[1]
Grade 4, N (%)	0	0
TEAE Related to Study Drug, N (%)	8 (33%)	10 (40%)
TEAE Leading to Study Drug Discontinuation, N (%)	0	0
Serious Adverse Event	0	0
Death	0	0
Treatment Emergent Lab Abnormalities, N (%)	9 (38%)	8 (32%)
Grade 1, N (%)	8 (33%)	6 (24%)
Grade 2, N (%)	2 (8%)	3 (12%)
Grade 3, N (%)	0	0
Grade 4, N (%)	0	0

Safety data includes patients through Day 57

ABI-1179 Phase 1b:
Cohorts B1 and B2 with Significant Reduction in HSV-2 Shedding

98%
reduction in HSV-2 shedding rate for cohort B1[2]



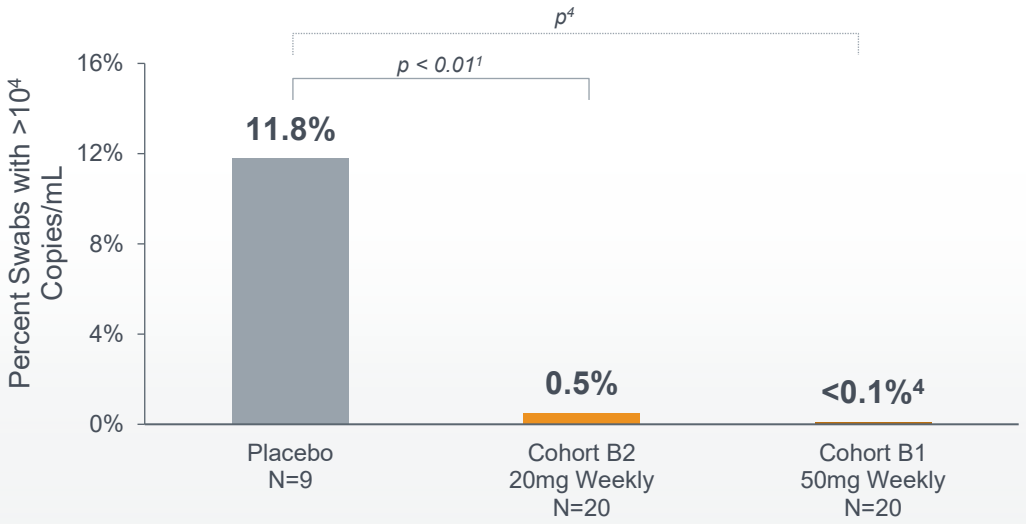
- Significant reduction in HSV-2 shedding rate for Cohorts B1 and B2 compared to Placebo

Interim ABI-1179 Phase 1b data as of November 25, 2025
1. Poisson regression analysis; 2. Data are interim estimates based on pooled placebo patients from these cohorts and may change with additional cohorts

ABI-1179 Phase 1b:
Reduction in HSV-2 High Viral Load Shedding in Cohorts B1 and B2

>99%

reduction in HSV-2 high viral load shedding for cohort B1[3,4]

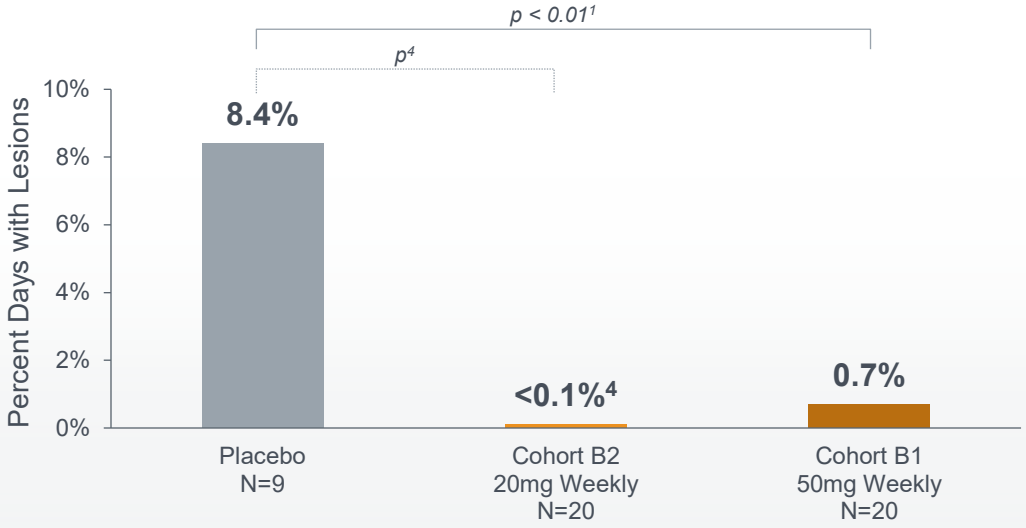


- Significant reduction in HSV-2 high viral load shedding for Cohorts B1 and B2 compared to Placebo
- Near complete elimination of HSV-2 high viral load swabs >10^4 copies/mL for both cohorts
  - Shedding >10^4 copies/mL a surrogate for increased HSV-2 transmission[2]

Interim ABI-1179 Phase 1b data as of November 25, 2025. 1. Poisson regression analysis; 2. Schiffer JT et al. J.R.Soc.Interface 11, 2014; 3. Data are interim estimates based on available placebo patients and may change with subsequent cohorts; 4. P-value cannot be reliably calculated given the >99% reduction compared to placebo. The observed difference is consistent with a highly significant effect.

ABI-1179 Phase 1b: Cohorts B1 and B2 with Significant Reduction in Virologically Confirmed Lesion Rate

91% reduction in virologically confirmed[2] lesion rate for cohort B1[3]



- Significant reduction in virologically confirmed lesion rate for Cohorts B1 and B2 compared to Placebo

Interim ABI-1179 Phase 1b data as of November 25, 2025 1. Poisson regression analysis; 2. Virologically confirmed lesions include lesions with any positive HSV-2 swab taken during the duration of the lesion; 3. Data are interim estimates based on pooled placebo patients from these cohorts and may change with additional cohorts; 4. P-value cannot be reliably calculated given the >99% reduction compared to placebo. The observed difference is consistent with a highly significant effect.

Executive Summary:
ABI-1179 Phase 1b Interim Update

ABI-1179 PH1B STATUS UPDATE

- Two weekly dosing cohorts have completed treatment (B1 and B2)
- One weekly dosing cohort is currently enrolling (B3)
- Phase 2 enabling activities underway

PHASE 1B TRIAL GOALS

- **80 to 85% reduction** in HSV-2 shedding vs. placebo
- **Significant reduction** in high viral load swabs[1]
- **Directional reduction** in genital lesions
- **Clean safety profile**

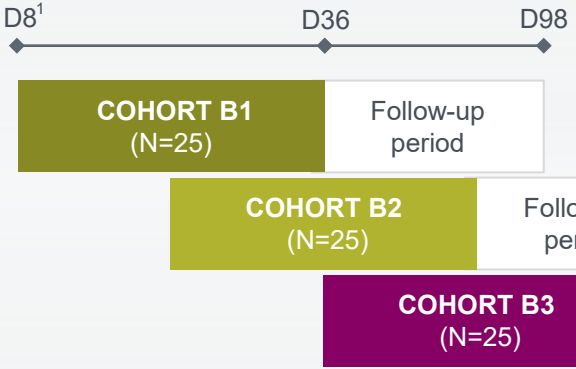
PHASE 1B COHORT B1 (50 MG, QW) RESULTS

- **98% reduction** in HSV-2 shedding ($p<0.01$)
- **>99% reduction** in high viral load swabs
- **91% reduction** in virologically confirmed[2] genital lesions ($p<0.01$)
- **No safety signals identified** to date

Interim ABI-1179 Phase 1b data as of November 25, 2025
1. Surrogate for HSV-2 transmission; Schiffer JT et al. J.R.Soc.Interface 11, 2014; 2. Virologically confirmed lesions include lesions with any positive HSV-2 swab taken during the duration of the lesion.
QW, weekly.

ABI-5366-101 Phase 1b Study Design

- **Double-blind, placebo-controlled sequential cohorts**
- **All participants seropositive for HSV-2 with recurrent genital herpes**
- **Each cohort with 20 patients receiving ABI-5366 and 5 patients receiving placebo**



COHORT	REGIMEN	LOADING DOSE	WEEKLY DOSE
B1	Weekly	150 mg	30 mg
B2	Weekly	350 mg	350 mg
B3	Monthly	350 mg x5	-

KEY EFFICACY ASSESSMENTS

- Anogenital swabs (Day 8-36); e.g., viral shedding rate
- Daily diary of symptoms; e.g., days with lesions

DATA IN CURRENT ANALYSIS

- Diary data through D36
- 100% Shedding data
- Complete safety data for cohorts B1 and B2
- Safety data up to Day 43 for cohort B3

Interim ABI-5366 Phase 1b data as of November 25, 2025. Interim ABI-5366 Phase 1b data for cohorts B1 and B2 as of July 29, 2025 was previously presented
1. Dosing begins on Day 1 with swab and diary evaluations beginning on Day 8

ABI-5366 Phase 1b:
Baseline Demographics and Disease Characteristics

BASELINE DEMOGRAPHICS AND DISEASE CHARACTERISTICS	PBO (N=10)	ABI-5366 30mg weekly (N=20)	ABI-5366 350mg weekly (N=20)	ABI-5366 Monthly/PBO (N=26)
Age, median (range)	44 (35 – 59)	37 (26 – 60)	41 (25 – 60)	35 (25 – 59)
Male, N (%)	5 (50)	10 (50)	13 (65)	8 (31)
Race, N (%)				
White	9 (90)	16 (80)	16 (80)	25 (96)
Black/African American	0	0	1 (5)	0
Native Hawaiian/Pacific Islander	0	2 (10)	1 (5)	0
Asian	1 (10)	2 (10)	2 (10)	1 (4)
Other	0	0	1 (5)	4 (15)
BMI, median (range)	24.1 (20.3 – 27.8)	26.4 (21.4 – 31.4)	28.3 (20.8 – 32.6)	25.9 (18.1 – 29.7)
Years since HSV Diagnosis, median (IQR)	10.9 (7.2 – 12.8)	9.4 (5.8 – 15.4)	9.3 (5.4 – 17.2)	10.6 (5.5 – 18.5)
Number of Lesions in past 12 months or prior to suppressive treatment, median (IQR)	5 (5.0 – 6.0)	5.8 (4.8 – 7.0)	5.0 (4.8 – 6.0)	6.0 (5.0 – 6.5)
Suppressive Treatment at Screening, N (%)	6 (60)	12 (60)	12 (60)	15 (58)

Interim ABI-5366 Phase 1b data as of November 25, 2025. The 30mg and 350 mg weekly cohorts are unblinded; the monthly/placebo cohort is in follow up and remains blinded
IQR, interquartile range

ABI-5366 Phase 1b:
Safety Summary – Adverse Events Cohorts B1, B2 & B3

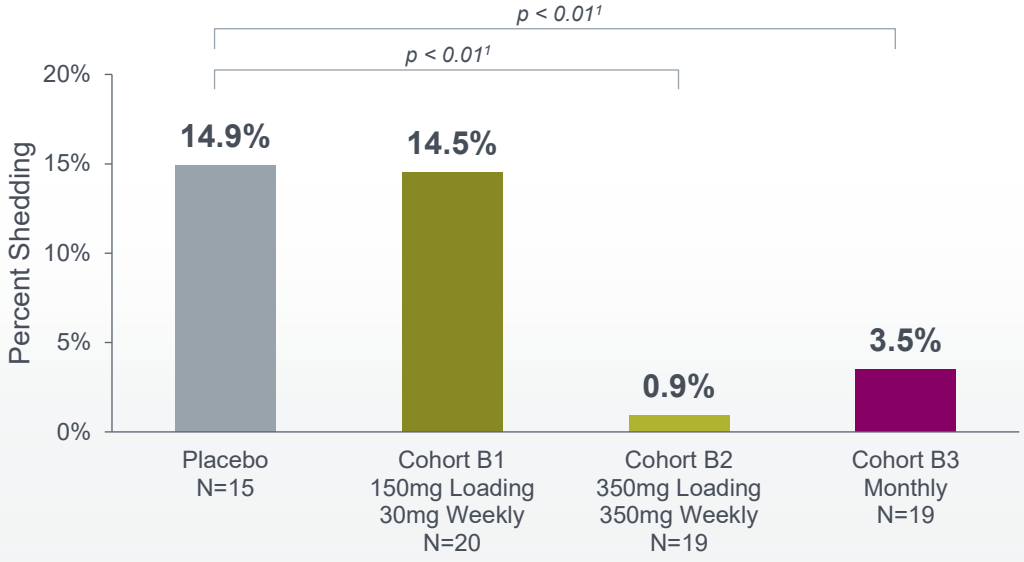
ADVERSE EVENTS AND LABORATORY ABNORMALITIES	PBO N=10	ABI-5366 30mg weekly N=20	ABI-5366 350mg weekly N=20	ABI-5366 Monthly/ PBO[1] N=26
Subjects with any Treatment Emergent Adverse Events (TEAE) (max grade), N (%)	9 (90%)	18 (90%)	19 (95%)	26 (100%)
Grade 1, N (%)	5 (50%)	12 (60%)	10 (50%)	12 (46%)
Grade 2, N (%)	4 (40%)	6 (30%)	9 (45%)	14 (54%)
Grade 3, N (%)	0	0	0	0
Grade 4, N (%)	0	0	0	0
TEAE Related to Study Drug, N (%)	4 (40%)	6 (30%)	3 (15%)	9 (35%)
TEAE Leading to Study Drug Discontinuation, N (%)	0	0	0	0
Serious Adverse Event	0	0	0	0
Death	0	0	0	0
Treatment Emergent Lab Abnormalities, N (%)	9 (90%)	14 (70%)	15 (75%)	14 (54%)
Grade 1, N (%)	7 (70%)	12 (60%)	12 (60%)	14 (54%)
Grade 2, N (%)	3 (30%)	3 (15%)	5 (25%)	2 (8%)
Grade 3, N (%)	1 (10%)[2]	1 (5%)[2]	1 (5%)[2]	0
Grade 4, N (%)	0	0	0	0

Safety data complete for cohorts B1 and B2; for cohort B3, includes safety data up to day 43

Interim ABI-5366 Phase 1b data as of November 25, 2025. Cohorts B1 and B2 are unblinded; cohort B3/placebo is in follow up and remains blinded; 1. Blinded safety data as cohort ongoing; 2. All Grade 3 lab abnormalities considered unrelated to treatment: participant with decreased neutrophils (PBO), exercise-associated elevation in creatine kinase (30mg weekly), and elevation of cholesterol in follow up in participant that had a grade 2 elevation at baseline (350mg weekly)

ABI-5366 Phase 1b:
Cohorts B2 and B3 with Significant Reduction in HSV-2 Shedding

94%
reduction in HSV-2 shedding rate for cohort B2[2]

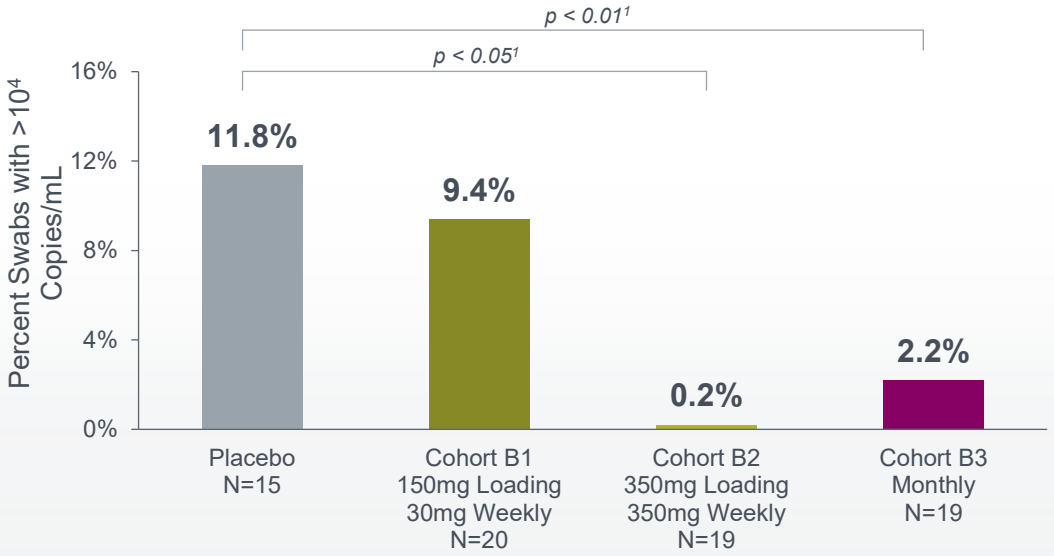


- Significant reduction in HSV-2 shedding rate for Cohorts B2 and B3 compared to Placebo

Interim ABI-5366 Phase 1b data as of November 25, 2025
1. Poisson regression analysis; 2. Data are interim estimates based on pooled placebo patients from these cohorts and may change with additional cohorts

ABI-5366 Phase 1b:
Reduction in HSV-2 High Viral Load Shedding in Cohorts B2 and B3

98%
reduction in HSV-2 high viral load shedding for cohort B2[3]



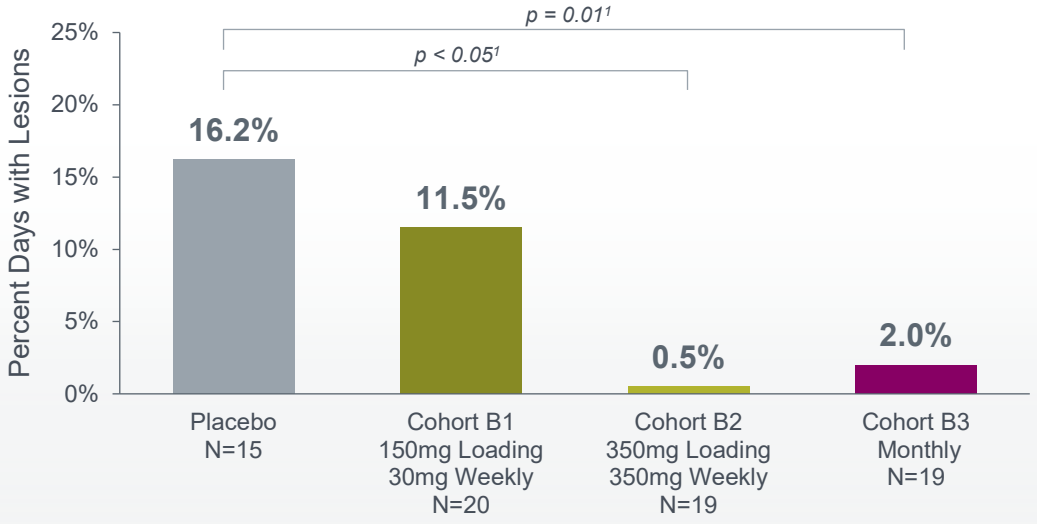
- Significant reduction in HSV-2 high viral load shedding for Cohorts B2 and B3 compared to Placebo
- Near complete elimination of HSV-2 high viral load swabs >10^4 copies/mL for Cohort B2
  - Shedding >10^4 copies/mL a surrogate for increased HSV-2 transmission[2]
- All (N=2) observed viral loads >10^4 copies/mL in Cohort B2 were in the presence of a genital lesion

Interim ABI-5366 Phase 1b data as of November 25, 2025
1. Poisson regression analysis; 2. Schiffer JT et al. J.R.Soc.Interface 11, 2014; 3. Data are interim estimates based on available placebo patients and may change with subsequent cohorts

ABI-5366 Phase 1b: Cohorts B2 and B3 with Significant Reduction in Virologically Confirmed Lesion Rate

97%

reduction in virologically confirmed[2] lesion rate for cohort B2[3]



- Significant reduction in virologically confirmed lesion rate for Cohorts B2 and B3 compared to Placebo

Interim ABI-5366 Phase 1b data as of November 25, 2025

1. Poisson regression analysis; 2. Virologically confirmed lesions include lesions with any positive HSV-2 swab taken during the duration of the lesion; 3. Data are interim estimates based on pooled placebo patients from these cohorts and may change with additional cohorts

Executive Summary:
ABI-5366 Phase 1b Interim Update

ABI-5366 PH1B STATUS UPDATE

- Two weekly (B1, B2) and one monthly (B3) dosing cohorts have completed dosing
- Phase 2 planning underway with study initiation expected mid 2026

PHASE 1B TRIAL GOALS

- **80 to 85% reduction** in HSV-2 shedding vs. placebo
- **Significant reduction** in high viral load swabs[1]
- **Directional reduction** in genital lesions
- **Clean safety profile**

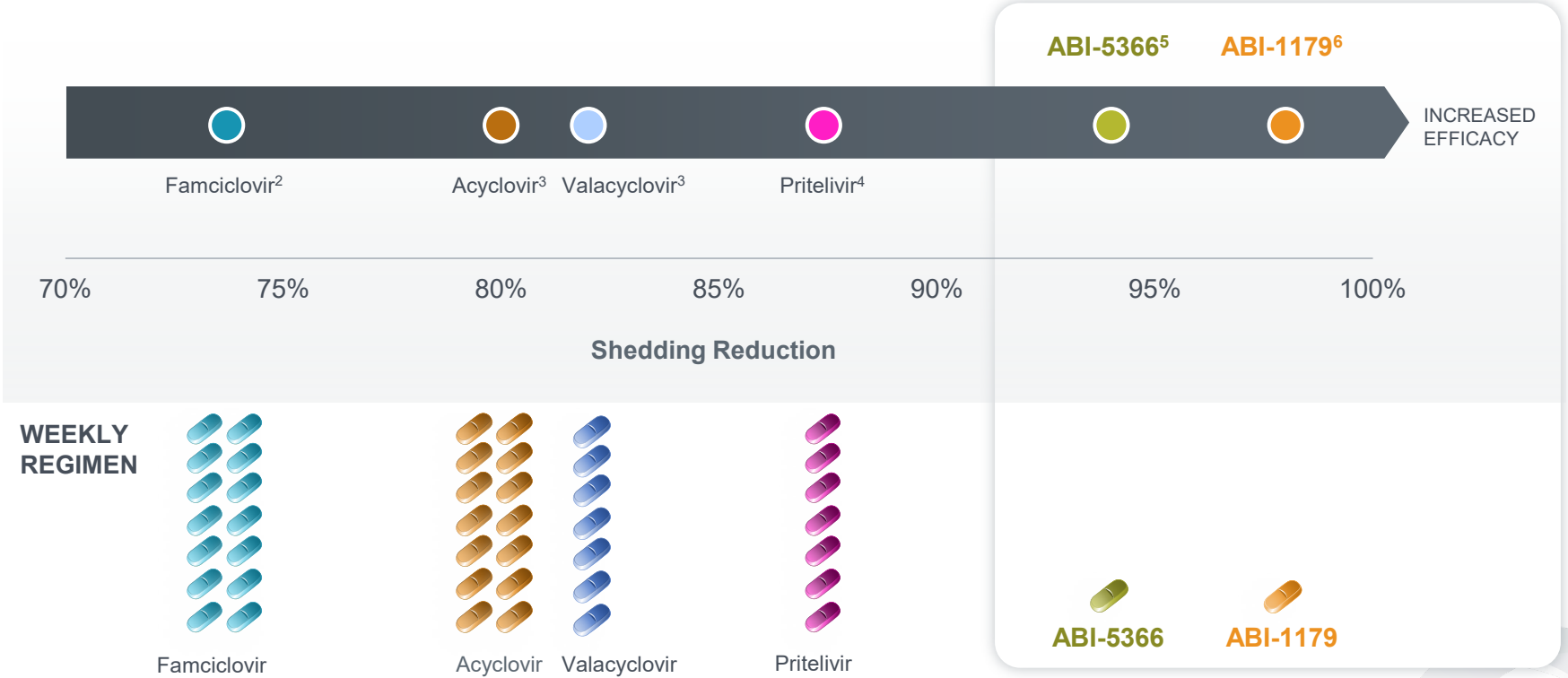
PHASE 1B COHORT B2 (350 MG, QW) RESULTS

- **94% reduction** in HSV-2 shedding ($p<0.01$)
- **98% reduction** in high viral load swabs ($p<0.05$)
- **97% reduction** in virologically confirmed[2] genital lesions ($p<0.05$)
- **No safety signals identified** to date
  - Chronic Toxicology: Studies complete and support proposed Phase 2 dosing

Interim ABI-5366 Phase 1b data as of November 25, 2025.; 1. Surrogate for HSV-2 transmission; Schiffer JT et al. J.R.Soc.Interface 11, 2014;
2. Virologically confirmed lesions include lesions with any positive HSV-2 swab taken during the duration of the lesion.

QW, weekly.

ABI-5366 & ABI-1179 Phase 1b Efficacy: Comparisons to Historical Placebo-Controlled Phase 1b Studies[1]



Note: Length of evaluation of studies differs by compound. Famciclovir=14 days, Acyclovir/Valacyclovir=42 days, Pritelivir/ABI-5366/ABI-1179=28 days

1. Not head-to-head studies; 2. Leone P et al. Sexually Transmitted Diseases, 34 (11), 2007; 3. Gupta et al. JID 190, 2004; 4. Wald A et al. NEJM 370 (3) 2014; 5. ABI-5366 Phase 1b data as of November 25, 2025; 6. ABI-1179 Phase 1b data as of November 25, 2025

Differentiated Development Programs Targeting Herpesviruses and Viral Hepatitis

PROGRAM	INDICATION	MECHANISM	IND/CTA ENABLING	PHASE 1	PHASE 2
ABI-5366	Recurrent genital herpes	Long acting HPI			
ABI-1179*	Recurrent genital herpes	Long acting HPI			
ABI-7272	Transplant-associated herpesviruses	NNPI**			
ABI-4334	Hepatitis B	Next-generation CAM			
ABI-6250	Hepatitis D	Entry inhibitor			
TBD	Research programs against multiple antiviral targets				

HPI: Helicase-primase inhibitor; NNPI: Non-nucleoside polymerase inhibitor; CAM: Capsid assembly modulator

*Gilead contributed program; ** Assembly and Gilead combined program

Q&A