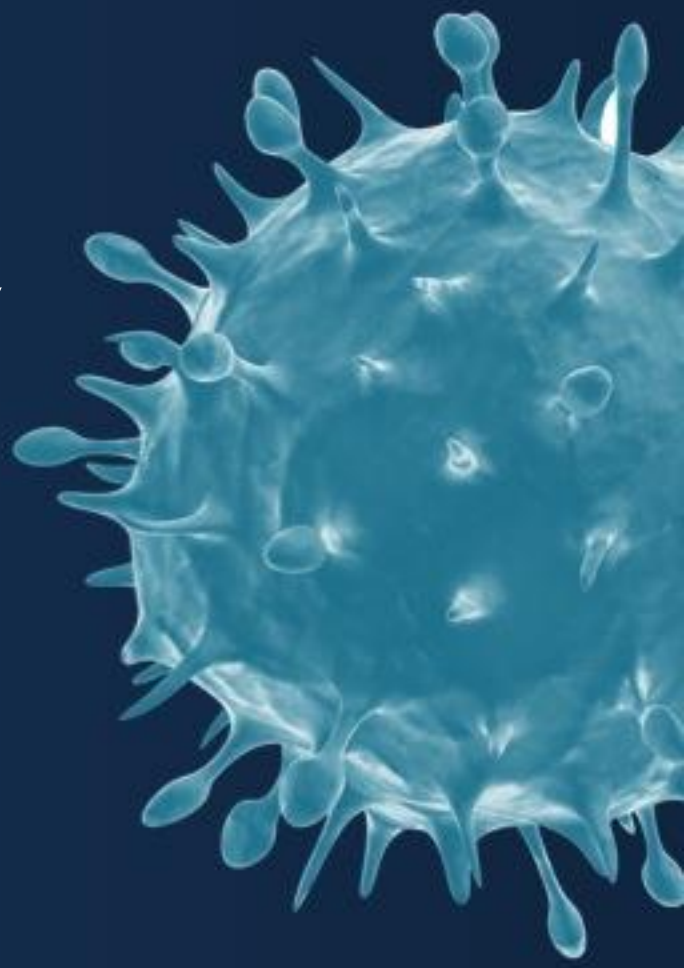
Positive 6 Month Durability Results

GEN-003 Immunotherapy for Genital Herpes

Phase 2 Dose Optimization Study



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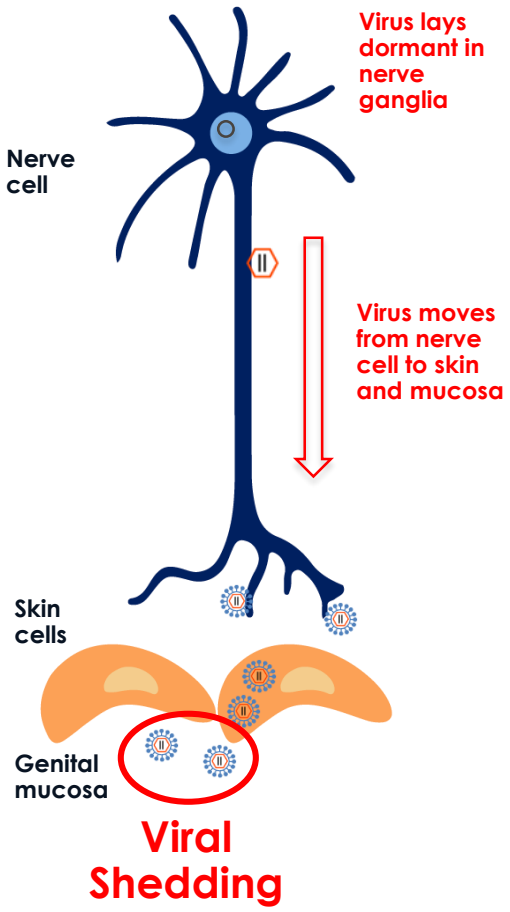
Highlights

- Improved impact on viral activity
- Durable clinical efficacy demonstrated across potential Phase 3 endpoints
- Potential for GEN-003 to serve as cornerstone treatment for genital herpes reinforced
- Clear path to FDA end of Phase 2 meeting in Q4 2016
- Data will be presented at IDWeek 2015™ in San Diego this Friday 9 October

Agenda for Today's Call

- **Disease pathology of genital herpes**
- **Current treatment paradigms**
- **Ongoing Phase 2 dose optimization trial**
  - Study goals
  - Positive 6-month durability data
- **GEN-003 value proposition**
- **Upcoming GEN-003 milestones**
- **Conclusions**
- **Q&A**

Viral Shedding Underpins Pathology of Genital Herpes



- A serious chronic infection caused by herpes simplex viruses (HSV)
- Periodic disease reactivation causes viral shedding at rates specific to individual patients
- Shedding necessary for genital lesions, disease transmission

Current Genital Herpes Treatment Paradigms

- **Approximately two thirds (~4.5m) of treated U.S. patients use oral antivirals episodically**
  - No impact on asymptomatic viral shedding/transmission risk
  - No impact on frequency of lesion outbreaks
  - Modest impact on duration of lesion outbreaks

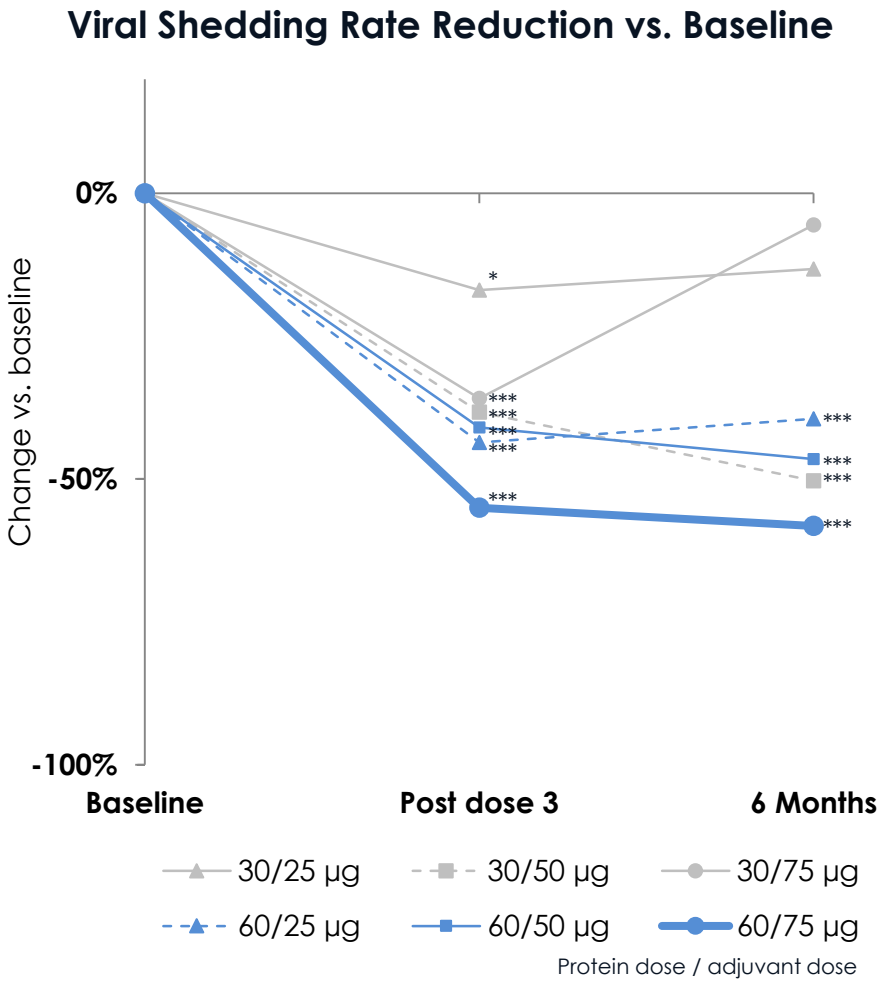
- **Remaining one third (~2.5m) treat with chronic oral therapy**
  - More durable reduction in viral shedding, visible lesions
  - Few options if outbreaks persist
  - Heavy compliance burden

Phase 2 Dose Optimization Trial Goals and Objectives

- **Goal: Select dose for late stage clinical trials**
- **Primary endpoint: Reduction in viral shedding vs. baseline***
- **Secondary objectives:**
  - Impact on clinical disease
    - Lesion rates*
    - Proportion recurrence free at 6* and 12 months
    - Time to next recurrence*
  - Safety and tolerability*
  - Immunogenicity

* Data discussed today

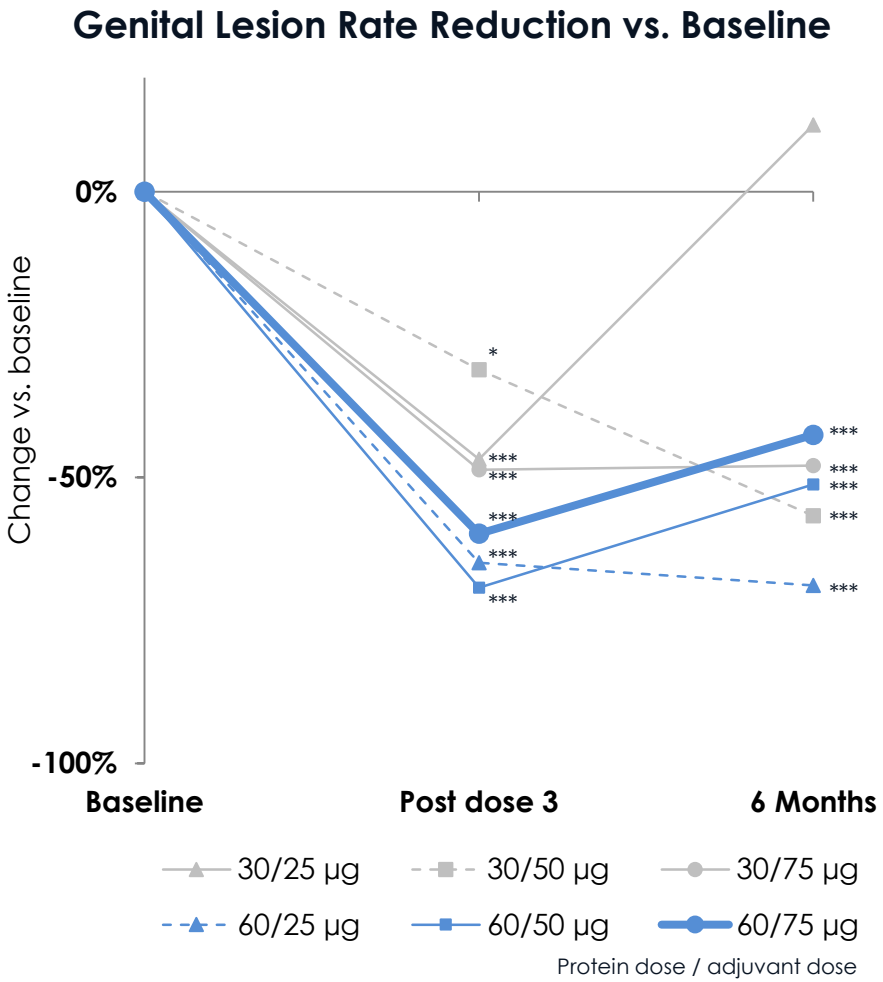
Sustained Reduction in Viral Shedding Rate at 6 Months



Poisson model analysis
vs. baseline *** p<0.0001, * p<0.05

- **Sustained viral shedding reductions across several doses**
- **Stronger response at 6 months than in Ph 1/2**
  - 58% vs. 40%
- **Upside potential for durable effect to 12 months**

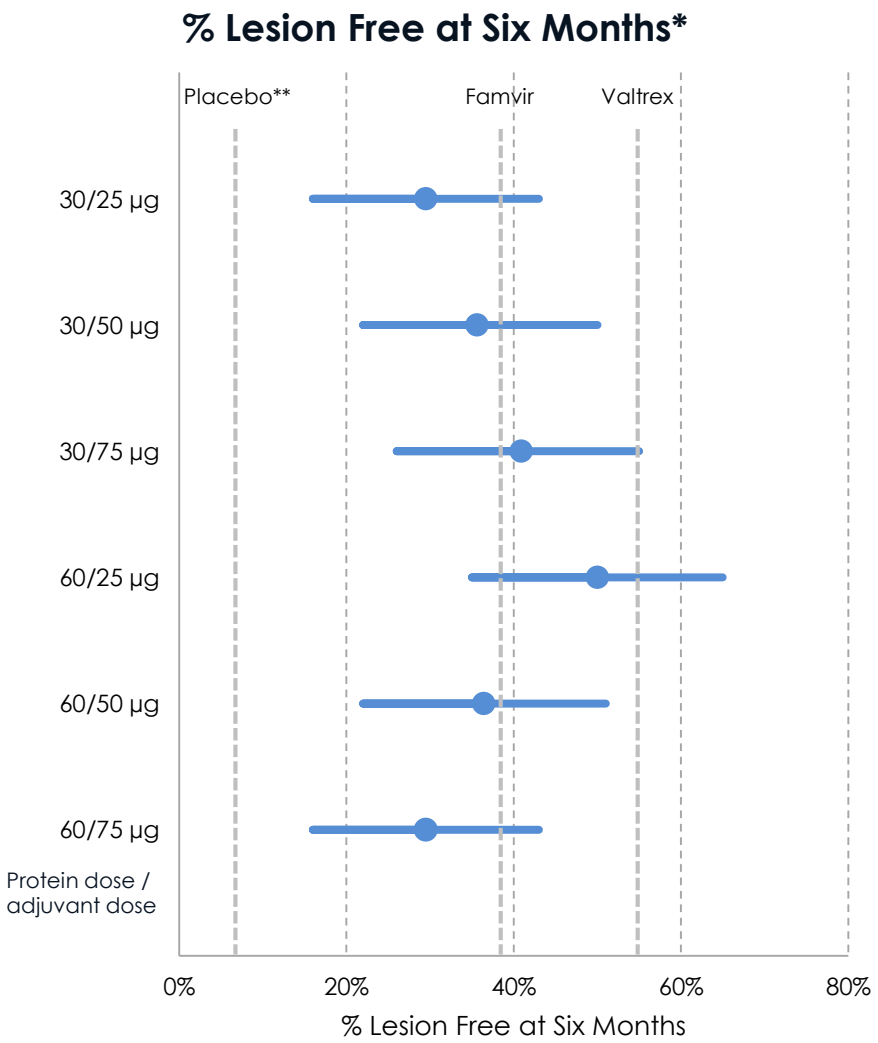
Genital Lesion Rate Reduction Sustained at 6 Months



Poisson model analysis
vs. baseline *** p<0.0001, * p<0.05

- **Sustained reductions at 6 months**
- **Lesion rates results broadly parallel viral shedding rate reductions**

Consistent Efficacy on % Lesion Free at 6 Months Post Dosing



* GEN-003 data displayed as mean result by dose group bounded by 95% confidence intervals
** n=134, Valtrex Phase 3 trial

- **Multiple doses similar to suppressive oral anti-viral therapy and superior to placebo from previous trials**
- **Small sample size**
  - ~45 per group vs. 269 for Valtrex

Time to First Recurrence Results Consistent Across Dose Groups

Dose Group (protein dose / adjuvant dose)	Time to First Recurrence
30 µg / 25 µg	159
30 µg / 50 µg	152
30 µg / 75 µg	160
60 µg / 25 µg	>180
60 µg / 50 µg	164
60 µg / 75 µg	161

- **Same data as % lesion free, analyzed slightly differently**
- **Consistent time to first recurrence across groups**
  - Range of 152 to >180 days
- **Efficacy similar to expected performance of orals, superior to placebo**

6 Months Durability Confirms GEN-003 Value Proposition

- **Convenient, durable efficacy may improve upon dominant treatment paradigm (episodic anti-viral therapy)**
  - Reduce outbreaks
  - Reduce shedding to reduce transmission risk
- **Potential benefits vs. chronic suppressive therapy**
  - Durable efficacy via novel mechanism
  - Orals reserved as rescue therapy during outbreaks
  - Improved compliance & convenience
- **GEN-003 profile supports revenue opportunity of >$1bn in US alone**

Two Further Significant GEN-003 Catalysts in Coming Quarters; FDA End of Phase 2 Meeting on Track for Q4 2016

TODAY
Ph 2 – 6 Month Data

- **Confirmed 6 month durability of effect**
- **Encouraging and consistent first read on 2° clinical endpoints**
- **Better efficacy than Ph1/2**

Q1 2016
Ph 2 – 12 Month Data

- **Upside if efficacy durable to 12 months**
- **Read on booster timing**
- **Read on 2° clinical endpoints**

Q2 2016
Ph 2b – Bridging

- **Potential to strengthen EoP2 package with confirmation of Phase 3 material**

Conclusions

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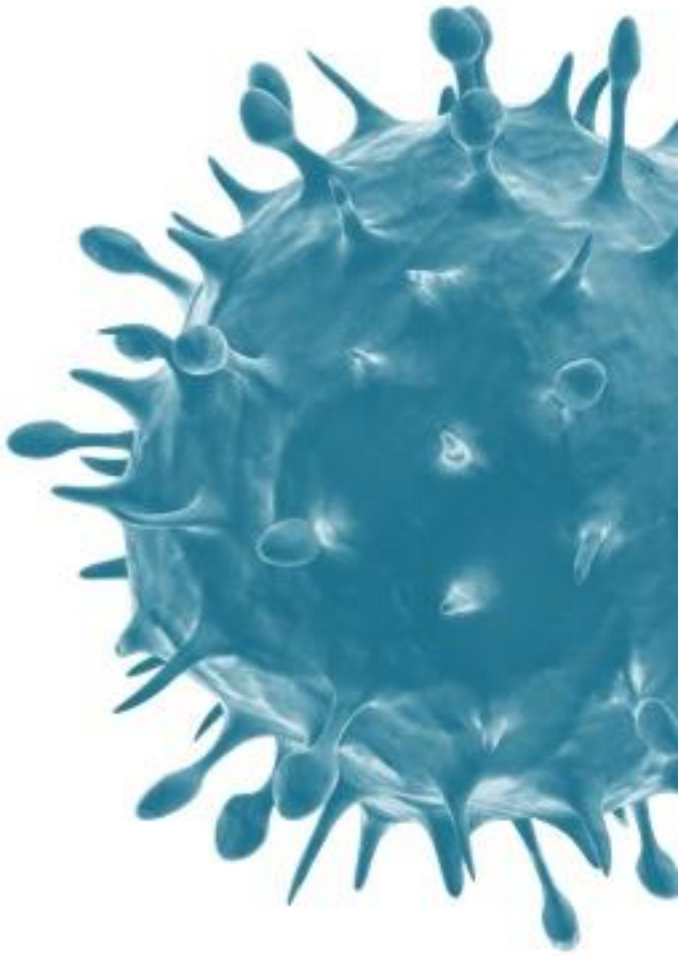
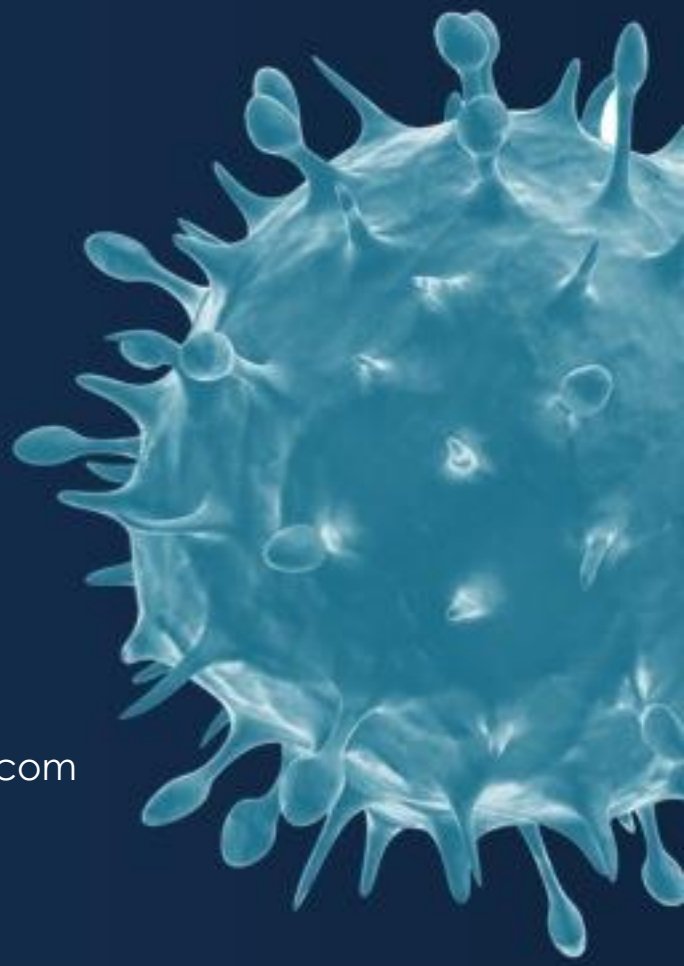
Questions & Answers





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