Retreatment with telaprevir/Peg-IFN/RBV after a short exposure
to telaprevir in Phase I studies: interim results from a Phase IIIb
rollover trial (C219)

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*All 9 patients had completed Week 8 of treatment at the time of the analysis; Peg-IFN:
P: Peg-IFN alfa-2a = 180μg/week; RBV: R = 1000–1200mg/day; TVR = telaprevir 750mg every 8 hours; HCV RNA determined using Roche COBAS
TaqMan® assay version 2.0 (lower limit of quantification 25 IU/mL, lower limit of detection approximately 10 IU/mL)

Sarrazin C, et al. 62nd AASLD; San Francisco, CA; November 04-08, 2011. Abst. 35.
Changes in HCV RNA Over Time During Previous Phase I Studies (101/103)

*Patient started Peg-IFN/RBV after Day 14

Serrazin C, et al. 62nd AASLD; San Francisco, CA; November 04-08, 2011. Abst. 35.

C219: HCV RNA Values Over Time (Week 8 Interim Analysis, TVR-exposed)

LOQ: limit of quantification
HCV RNA values below LOQ are imputed with an arbitrary value: 17.5 for <25 IU/mL detectable and 5 for <25 IU/mL undetectable

Serrazin C, et al. 62nd AASLD; San Francisco, CA; November 04-08, 2011. Abst. 35.
Analysis of Resistance-Associated Amino Acid Variants (RAVs) in Non-SVR Patients Enrolled in a Retrospective Long-term Follow-up Analysis of Boceprevir Phase 3 Clinical Studies

Comparative Activity of PIs Against HCV NS3 Proteases from Genotypes 1-6 (SEAP Assay)

Activity of MK-5172 and TMC-435 Against NS3 Enzymes from Different Genotypes

- MK-5172 potently inhibited enzymes from genotypes 1-4 at IC50 concentrations <1 nM compared with TMC-435 (IC50 range 2.9-2750 nM)
- MK-5172 was >3000-fold more active against the genotype 3a enzyme than TMC-435, a finding consistent with the relative difference in clinical activity of these compounds in genotype 3 infected patients

The inhibitory activity of MK-5172 against purified NS3 proteases from different HCV genotypes was evaluated in an in vitro enzyme assay (data courtesy of Aileen Soriano, In vitro Pharmacology, Merck).

See Poster 346, Petry et al., AASLD, 2011; Moreno et al "A Phase Ila, open-label study to assess the antiviral activity of TMC-435 monotherapy in patients infected with HCV genotypes 2-6; AASLD 2010

Conclusions

- The novel macrocyclic HCV PI inhibitor, MK-5172, demonstrated potent activity against the majority of primary 1st generation PI RAVs in biochemical and a cell-based phenotype assays.

- MK-5172 inhibited patient-derived NS3 proteases across HCV genotypes 1-6 with IC50 values ranging between 0.9-259 nM

- MK-5172 fulfills the profile expected of a next-generation PI:
  - Pan-genotypic activity
  - Potent activity versus key 1st generation PI RAVs