Gilead’s Harvoni and Sovaldi Demonstrate Efficacy and Safety among Chronic Hepatitis C Patients with Advanced Liver Disease

April 23, 2015 1:01 AM ET

-- High Cure Rates in More Than 600 Genotype 1 and 4 Patients With Limited or No Approved Treatment Options --

VIENNA, Austria--(BUSINESS WIRE)--Apr. 23, 2015-- Gilead Sciences, Inc. (Nasdaq: GILD) today announced results from several Phase 2 clinical studies evaluating investigational uses of Harvoni® (ledipasvir 90 mg/sofosbuvir 400 mg) and other Sovaldi® (sofosbuvir 400 mg)-based regimens for the treatment of chronic hepatitis C virus (HCV) infection in patients with advanced liver disease, including patients with decompensated cirrhosis, patients with fibrosing cholestatic hepatitis C (a rare and severe form of the disease following liver transplantation) and patients with portal hypertension. These data will be presented this week at the 50th Annual Meeting of the European Association for the Study of the Liver (The International Liver Congress™ 2015) in Vienna, Austria.

“The patients included in these analyses are among the most difficult to both treat and cure and, until now, have had limited or no treatment options,” said Michael P. Manns, MD, Professor and Chairman, Department of Gastroenterology, Hepatology and Endocrinology, Hannover Medical School, Hannover, Germany. “These data demonstrate that, even among these difficult-to-treat patient groups, sofosbuvir-based oral therapy offers the potential of high cure rates, improves outcomes and is generally well tolerated with a favorable safety profile.”

Harvoni and Sovaldi are each approved in the United States for the treatment of chronic HCV infection. Harvoni is indicated for patients with genotype 1; Sovaldi is used in combination with other agents and its efficacy has been established in patients with genotypes 1-4.

Decompensated and Post-Liver Transplantation

In SOLAR-2 (Study GS-US-337-0124, Oral #G02), 328 genotype 1 or 4 HCV patients with decompensated liver disease before liver transplantation or recurrent HCV infection following liver transplantation were randomized to receive either 12 or 24 weeks of Harvoni plus ribavirin (RBV). Ten patients were excluded from the analysis because of transplantation (n=7) or because they were pre-transplantation, but not decompensated (n=3); an additional 27 of these patients have not yet reached post-treatment week 12. The number and proportion of genotype 1 patients with available data achieving sustained virologic response 12 weeks after treatment (SVR12) are summarized in the table below.

<table>
<thead>
<tr>
<th>Treatment Duration</th>
<th>Pre-Transplant Decompensated Cirrhosis (CPT B+C)</th>
<th>Recurrent HCV and Compensated Cirrhosis (CPT A)</th>
<th>Post-Liver Transplantation</th>
<th>Decompensated Cirrhosis (CPT B+C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 weeks</td>
<td>86% (n=37/43)</td>
<td>96% (n=72/75)</td>
<td>91% (n=20/22)</td>
<td></td>
</tr>
<tr>
<td>24 weeks</td>
<td>85% (n=35/41)</td>
<td>98% (n=57/58)</td>
<td>95% (n=19/20)</td>
<td></td>
</tr>
</tbody>
</table>

Of the 32 genotype 4 patients, 27 (84 percent) achieved SVR12. Additionally, among patients with compensated and decompensated cirrhosis before and after liver transplantation, virologic response was associated with improvements in Model for End-Stage Liver Disease (MELD) and CPT scores used to stage end-stage liver disease.

The most common adverse events were fatigue, anemia, nausea and headache. Overall, six patients discontinued treatment due to adverse events, five of whom had decompensated cirrhosis.

Further supporting the safety profile of Harvoni plus RBV among this patient population was data from a pooled safety
analysis of 659 patients treated in the SOLAR-1 and SOLAR-2 studies (ePoster #P0774). Both studies evaluated Harvoni plus RBV for 12 or 24 weeks in genotype 1 or 4 HCV patients with decompensated liver disease or recurrent HCV infection following liver transplantation. SOLAR-1 was conducted in the United States, with data presented in November at The Liver Meeting 2014 and SOLAR-2 was conducted in Australia, Canada, Europe and New Zealand. Overall, adverse events were similar to those seen in previous studies, including the Phase 3 ION studies. Fewer than three percent (n=19/659) of patients discontinued due to an adverse event, none of which were attributed to Harvoni treatment. There were a total of 20 deaths in these two studies, none of which was assessed by the investigator as related to study treatment.

**Fibrosing Cholestatic Hepatitis C**

A further subset of the SOLAR-1 and SOLAR-2 studies (ePoster #P0779) demonstrated 100 percent SVR12 rates among 11 patients who were confirmed to have fibrosing cholestatic hepatitis (FCH), following 12 or 24 weeks of Harvoni plus RBV. FCH is a rare and severe form of recurrent hepatitis that occurs after liver transplantation. It is associated with high morbidity and mortality rates and there are no currently approved treatment options.

**Cirrhosis and Portal Hypertension**

Study GS-US-334-0125 (ePoster LB #4283) evaluated 50 genotype 1-4 HCV-infected patients with cirrhosis and portal hypertension. Patients were randomized to receive either 48 weeks of Sovaldi plus RBV initially (n=25) or at the conclusion of a 24-week observation period (n=21). Four patients in the observation arm discontinued the study prior to receiving treatment. Of the patients who received treatment with Sovaldi plus RBV, 72 percent (n=33/46) achieved SVR12. A subset of 37 patients had paired hepatic venous pressure gradient (HVPG) measurements at baseline and end of treatment. Of these, 38 percent (14/37) of patients experienced a ≥10 percent reduction and 24 percent (9/37) of patients experienced a ≥20 percent decrease in HVPG from baseline to end of treatment. A baseline total bilirubin of <1.5 mg/dL was associated with a ≥20 percent decrease in HVPG (p=0.03). This study is the first to demonstrate the effect of direct acting antivirals like Sovaldi on HVPG, and additional assessments will be undertaken in these patients one-year post treatment.

The safety and efficacy of these investigational uses of Harvoni and Sovaldi have not been established.

**Important Safety Information About Harvoni**

**Warnings and Precautions**

**Risk of Serious Symptomatic Bradycardia When Coadministered with Amiodarone:** Amiodarone is not recommended for use with Harvoni due to the risk of symptomatic bradycardia, particularly in patients also taking beta blockers or with underlying cardiac comorbidities and/or with advanced liver disease. In patients without alternative, viable treatment options, cardiac monitoring is recommended. Patients should seek immediate medical evaluation if they develop signs or symptoms of bradycardia.

**Risk of Reduced Therapeutic Effect of Harvoni Due to P-gp Inducers:** Rifampin and St. John’s wort are not recommended for use with Harvoni as they may significantly decrease ledipasvir and sofosbuvir plasma concentrations.

**Related Products Not Recommended:** Harvoni is not recommended for use with other products containing sofosbuvir (Sovaldi).

**Adverse Reactions**

Most common (≥10 percent, all grades) adverse reactions were fatigue and headache.

**Drug Interactions**
In addition to rifampin and St. John’s wort, coadministration of Harvoni is also not recommended with carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifabutin, rifapentine, and tipranavir/ritonavir. Such coadministration is expected to decrease the concentration of ledipasvir and sofosbuvir, reducing the therapeutic effect of Harvoni.

Coadministration of Harvoni is not recommended with simeprevir due to increased concentrations of ledipasvir and simeprevir. Coadministration is also not recommended with rosvastatin or co-formulated elvitegravir/cobicistat/tenofovir disoproxil fumarate due to increased concentrations of rosvastatin and tenofovir, respectively.

Consult the full Prescribing Information for Harvoni for more information on potentially significant drug interactions, including clinical comments.

Important Safety Information About Sovaldi

Contraindications

Sovaldi combination treatment with ribavirin or with peginterferon alfa plus ribavirin is contraindicated in women who are pregnant or may become pregnant and men whose female partners are pregnant because of the risk for birth defects and fetal death associated with ribavirin. Contraindications to peginterferon alfa and ribavirin also apply to Sovaldi combination treatment. Refer to the prescribing information of peginterferon alfa and ribavirin for a list of their contraindications.

Warnings and Precautions

Serious Symptomatic Bradycardia When Coadministered with Amiodarone and Another HCV Direct Acting Antiviral (DAA): Amiodarone is not recommended for use with Sovaldi in combination with another DAA due to the risk of symptomatic bradycardia, particularly in patients also taking beta blockers or with underlying cardiac comorbidities and/or with advanced liver disease. In patients without alternative, viable treatment options, cardiac monitoring is recommended. Patients should seek immediate medical evaluation if they develop signs or symptoms of bradycardia.

Pregnancy: Use with ribavirin or peginterferon alfa/ribavirin: Ribavirin therapy should not be started unless a report of a negative pregnancy test has been obtained immediately prior to initiation of therapy. Female patients of childbearing potential and their male partners must use two forms of non-hormonal contraception during treatment and for at least 6 months after treatment has concluded. Routine monthly pregnancy tests must be performed during this time. Refer to the prescribing information for ribavirin.

Use with Potent P-gp Inducers: Rifampin and St. John’s wort should not be used with Sovaldi as they may significantly decrease sofosbuvir plasma concentration, reducing its therapeutic effect.

Adverse Reactions

Most common (≥20 percent, all grades) adverse reactions for:

Sovaldi + peginterferon alfa + ribavirin combination therapy were fatigue, headache, nausea, insomnia, and anemia

Sovaldi + ribavirin combination therapy were fatigue, and headache

Drug Interactions

In addition to rifampin and St. John’s wort, coadministration of Sovaldi is not recommended with carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifabutin, rifapentine, and tipranavir/ritonavir. Such coadministration is expected to decrease the concentration of sofosbuvir, reducing its therapeutic effect.

About Gilead
Gilead Sciences is a biopharmaceutical company that discovers, develops and commercializes innovative therapeutics in areas of unmet medical need. The company’s mission is to advance the care of patients suffering from life-threatening diseases. Gilead has operations in more than 30 countries worldwide, with headquarters in Foster City, California.

**Forward-Looking Statement**

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks, uncertainties and other factors, including that Gilead may observe unfavorable results from additional clinical trials involving Sovaldi and Harvoni for various difficult-to-treat patient groups, including patients with decompensated cirrhosis, fibrosing cholestatic hepatitis C and portal hypertension. These risks, uncertainties and other factors could cause actual results to differ materially from those referred to in the forward-looking statements. The reader is cautioned not to rely on these forward-looking statements. These and other risks are described in detail in Gilead’s Annual Report on Form 10-K for the year ended December 31, 2014, as filed with the U.S. Securities and Exchange Commission. All forward-looking statements are based on information currently available to Gilead, and Gilead assumes no obligation to update any such forward-looking statements.

*U.S. full Prescribing Information for Sovaldi and Harvoni is available at* [www.gilead.com](http://www.gilead.com).

*Sovaldi and Harvoni are registered trademarks of Gilead Sciences, Inc., or its related companies.*

*For more information on Gilead Sciences, please visit the company’s website at [www.gilead.com](http://www.gilead.com), follow Gilead on Twitter (@GileadSciences) or call Gilead Public Affairs at 1-800-GILEAD-5 or 1-650-574-3000.*

Source: Gilead Sciences, Inc.

Gilead Sciences, Inc.
Sung Lee, +1 650-524-7792 (Investors)
Nathan Kaiser, +1 650-522-1853 (Media)
Michele Rest, +1 650-577-6935 (Media)