The International Liver Congress™ 2016
Press Conference

16 April, 2016
Chair: Professor Frank Tacke
EASL Scientific Committee Member
Introductions and welcome
Professor Frank Tacke, EASL Scientific Committee Member
Housekeeping

- Please turn your mobile phones onto silent
- Please hold questions until the Q&A at the end of the session
- Photos are permitted in this press conference
- In the event of a fire, please go to the nearest fire exit
<table>
<thead>
<tr>
<th>Content</th>
<th>Abstract</th>
<th>Speaker</th>
<th>Time</th>
<th>Embargo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and official opening of ILC 2016 press conference</td>
<td></td>
<td>Professor Frank Tacke</td>
<td>08:00</td>
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<tr>
<td>Six weeks of sofosbuvir/ledipasvir (SOF/LDV) are sufficient to treat</td>
<td>LB08</td>
<td>Professor Heiner Wedemeyer</td>
<td>08:10</td>
<td>Sat 16 April 07.00 CET</td>
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<td>acute hepatitis C virus genotype 1 monoinfection: The HepNet acute</td>
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<td>HCV IV study</td>
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<td>NVR 3-778, a first-in-class HBV core inhibitor, alone and in combination</td>
<td>LB06</td>
<td>Professor Man-Fung Yuen</td>
<td>08:20</td>
<td>Sat 16 April 07.00 CET</td>
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<td>with peg-interferon (PEGIFN), in treatment-naive HBeAg-positive patients: early reductions in HBV DNA and HBeAg</td>
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<tr>
<td>Norursodeoxycholic acid improves cholestasis in primary sclerosing</td>
<td>LB02</td>
<td>Professor Michael Trauner</td>
<td>08:30</td>
<td>Sat 16 April 07.00 CET</td>
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<td>cholangitis: results of a phase II dose finding study</td>
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<tr>
<td>High rates of SVR12 in adolescents treated with the combination of</td>
<td>GS17</td>
<td>Dr Sanjay Bansal</td>
<td>08:40</td>
<td>Sat 16 April 07.00 CET</td>
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<td>ledipasvir/sofosbuvir</td>
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<tr>
<td>Question and answer session &amp; closing remarks</td>
<td></td>
<td>All authors and Professor</td>
<td>08:50</td>
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<td></td>
<td></td>
<td>Frank Tacke</td>
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<td>Session close</td>
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<td>09.00</td>
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Late breakers

- Late-breaking abstract presentations today share novel and practice changing findings
- Late breaker findings are from clinical trials that are ongoing or just terminated and have not yet been published
- “Hot data” will be released on topics like Hepatitis C, Hepatitis B, primary sclerosing cholangitis and cirrhosis
- Eight studies due for presentation at today’s late breaker session, 16:00 – 18:00, Hall 6.0

Late-breaker submission deadline: Feb 24, 2016
Regular abstract submission deadline: Nov 24, 2015
State of the art lecture

- Presented by Michael Karin, Distinguished Professor of Pharmacology and Pathology at University of California, San Diego, USA

- Recipient of numerous awards, including American Cancer Society Research Professorship, the Harvey Prize in Human Health and the Brupbacher Prize in Cancer Research

- Professor Karin has spent his entire academic career investigating stress and inflammation signaling covering research approaches from basic biochemistry through molecular cell biology to animal pathophysiology

- Dr Karin’s lecture from 10:30-11:30 in Hall 6.0 will show how chronically damaged liver tissues give rise to hepatocellular carcinoma – the most common form of liver cancer
Hepatitis C recommendations

• All studies being presented today offer immense educational value on:
  • Patient-relevant benefits from Hepatitis C therapy
  • Improving cure rates in different types of patients (treatment-experienced, cirrhosis) and comorbidities (HIV, renal failure)
  • Nowadays more than 10 different drugs for HCV available
  • Personalized algorithms for optimal treatment success

• New EASL recommendations to guide clinicians through this topic are now available and are being presented today from 18:30 – 19:30, Hall 6.0
Six weeks of sofosbuvir/ledipasvir (SOF/LDV) are sufficient to treat acute hepatitis C virus genotype 1 monoinfection:

The HepNet Acute HCV IV Study

Katja Deterding, Christoph Spinner, Eckart Schott, Tania Welzel, Guido Gerken, Hartwig Klinker, Ulrich Spengler, Johannes Wiegand, Julian Schulze zur Wiesch, Anita Pathil, Markus Cornberg, Andreas Umgelter, Caroline Zöllner, Stefan Zeuzem, Heiko von der Leyen, Dorothee von Witzendorff, Michael P. Manns, Heiner Wedemeyer

for the HepNet Acute HCV IV Study Group
Disclosures

This investigator-initiated trial was supported by

- **GILEAD Sciences;** provided study medication and financial support
- the HepNet Study-House, project of the German Liver Foundation, funded by the German Centre for Infection Research (DZIF)

K. Deterding: Sponsored Lectures (National and International): MSD/Merck, AbbVie, Gilead
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T. Welzel: Disclosures entered at EASL Homepage
G. Gerken: Consultant: MSD, BMS, Gilead, AbbVie, Janssen-Cilag, Sponsored Lectures (National and International): MSD, BMS, Gilead, AbbVie, Janssen-Cilag, Falk, Other: MSD, BMS, Gilead, AbbVie, Janssen-Cilag, Falk
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U. Spengler: Consultant: BMS, Janssen, MSD, Sponsored Lectures (National and International): AbbVie, BMS, Falk, Gilead, Janssen, MSD, Other: AbbVie, BMS, Gilead, MSD
J. Wiegand: Grant: Siemens, Consultant: AbbVie, BMS, Gilead, Roche, Siemens, and Janssen, Sponsored Lectures (National and International): AbbVie, BMS, Gilead, Roche, Siemens, and Janssen
J. Schulze zur Wiesch: Sponsored Lectures (National and International): Gilead, MSD, AbbVie, A. Pathil: Sponsored Lectures (National and International): AbbVie, BMS, Other: AbbVie, BMS, Gilead
M. Cornberg: Consultant: AbbVie, BMS, Janssen-Cilag, MSD/Merck, Roche, Sponsored Lectures (National and International): AbbVie, BMS, Gilead, Janssen-Cilag, MSD/Merck, Roche, A. Umgelter: Sponsored Lectures (National and International): BMS, MSD, Gilead, Janssen, Other: BMS, Gilead
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Acute Hepatitis C Virus (HCV) - Infection

• The incidence of acute HCV infection has declined in the recent years, however new infections still occur.

• 10-50% of patients with acute hepatitis C may clear the infection spontaneously.

• Early interferon-based antiviral treatment is highly effective.

   Doyle et al., J Viral Hep. 2015, Santantonio et al., Hepatology 2014, Hullegie et al., J Hepatol 2016
The German Acute HCV Studies

German Acute HCV I – Study (1998 – 2000)
- Conventional interferon alpha-2b – Monotherapy 6 month
- SVR 98% (n = 44)

Jaeckel et al., NEJM 2001

German Acute HCV II – Study (2001 – 2004)
- Peg-interferon alpha-2b – Monotherapy 6 months
- SVR 89% (n = 89)

Wiegand et al., Hepatology 2006

German Acute HCV III – Study (2004 – 2010)
- Delayed vs. immediate Peg-interferon alpha-2b – Treatment 6 months
- SVR delayed therapy 93%, SVR immediate therapy 90% (n = 132)

Deterding et al., Lancet Infect Dis. 2013
The efficacy and safety of IFN-free treatment of acute hepatitis C with direct acting antivirals against HCV is not well studied for HCV mono-infected patients.
Aim of the study

The German HepNet Acute HCV IV Study:

• The aim of this study was to evaluate the efficacy of treatment with sofosbuvir/ledipasvir (SOF/LDV) for **6 weeks** in patients with acute genotype 1 HCV mono-infection
Inclusion criteria

Acute hepatitis C virus infection as defined by the following criteria:

- known or suspected exposure to HCV within the preceding four months
- documented seroconversion to positivity for antibodies against HCV
- and/or ALT level of more than 10 times upper the limit of the normal range

- Male and female patients $\geq$ 18 years of age
- Detectable plasma HCV-RNA ($> 10^3$ IU/ml)
- Compensated liver disease
- HIV negative, HBsAg negative, anti-HAV-IgM negative
- No ongoing drug abuse
### Study design

<table>
<thead>
<tr>
<th>Scr</th>
<th>BI</th>
<th>6 weeks</th>
<th>24 weeks</th>
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<tr>
<td></td>
<td></td>
<td>SOF/LDV (FDC)</td>
<td>FU4, FU12, FU24</td>
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</tbody>
</table>

- The German HepNet Acute HCV IV Study was designed as a single arm, prospective multicenter pilot study.

10 centers in Germany recruited 20 patients from Nov 2014 – Oct 2015:

- München (C. Spinner)
- Berlin (E. Schott)
- Frankfurt (T. Welzel)
- Hannover (M. Manns)
- Würzburg (H. Klinker)
- Essen (G. Gerken)
- Leipzig (J. Wiegand)
- Heidelberg (A. Pathil)
- Bonn (U. Spengler)
- Hamburg (A. Lohse)
## Baseline characteristics

<table>
<thead>
<tr>
<th></th>
<th>Study cohort</th>
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<tbody>
<tr>
<td>Patients (n)</td>
<td>20</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>12 (60%)</td>
</tr>
<tr>
<td>Age (years), mean (range)</td>
<td>46 (23 – 63)</td>
</tr>
<tr>
<td>HCV - Genotype</td>
<td></td>
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<tr>
<td>- Genotype 1a, n (%)</td>
<td>11 (55%)</td>
</tr>
<tr>
<td>- Genotype 1b, n (%)</td>
<td>9 (45%)</td>
</tr>
<tr>
<td>Risk factors for infection</td>
<td></td>
</tr>
<tr>
<td>- Sexual transmission, n (%)</td>
<td>11 (55%); including 5 men having sex with men</td>
</tr>
<tr>
<td>- Medical procedures/needle stick injury, n (%)</td>
<td>5 (25%)</td>
</tr>
<tr>
<td>- Nail treatment, n (%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>- Unspecified, n (%)</td>
<td>2 (10%)</td>
</tr>
<tr>
<td>ALT (U/l), mean (range)</td>
<td>463 (32 – 2716)</td>
</tr>
<tr>
<td>Bilirubin (mg/dl), mean (range)</td>
<td>24 (5.13 – 111)</td>
</tr>
</tbody>
</table>
Virological response

number of patients (n)

week 2  week 4  week 6  FU 12

- HCV RNA < 15 IU/ml
- HCV RNA undetectable

Acute HCV IV Study, EASL 2016
Virological response

- **HCV RNA < 15 IU/ml**
- **HCV RNA undetectable**

Week 2, Week 4, Week 6, FU 12

Acute HCV IV Study, EASL 2016
Virological response

- HCV RNA < 15 IU/ml
- HCV RNA undetectable

Number of patients (n)

- Week 2
- Week 4
- Week 6
- FU 12

Acute HCV IV Study, EASL 2016
Virological response

<table>
<thead>
<tr>
<th>Week</th>
<th>HCV RNA &lt; 15 IU/ml</th>
<th>HCV RNA undetectable</th>
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<tr>
<td>week 2</td>
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<tr>
<td>week 4</td>
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<tr>
<td>week 6</td>
<td></td>
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<tr>
<td>FU 12</td>
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</tbody>
</table>

- HCV RNA < 15 IU/ml
- HCV RNA undetectable

Acute HCV IV Study, EASL 2016
ALT kinetics over time

- Alanine aminotransferase (ALT, U/l) over time:
  - Screening: Initial levels
  - Baseline: Before treatment
  - Week 2, Week 4, Week 6: During treatment
  - FU 12: Follow-up 12 weeks

- Normal ALT levels:
  - Baseline: 1 (5%)
  - Week 2: 9 (45%)
  - Week 4: 17 (85%)
  - Week 6: 16 (80%)
  - FU 12: 18 (90%)
Adverse events

22 possible/probable drug-related adverse events until FU12

- gastrointestinal symptoms: 4 patients (20%)
- fatigue: 3 patients (15%)
- hair loss: 3 patients (15%)
- headache: 2 patients (10%)
- skin reaction: 2 patients (10%)
- abdominal pain: 2 patients (10%)
- psychiatric disorders: 2 patients (10%)
- other: sleeping disorder, mouth burn, eye disorders, spleen pain

one serious adverse event (SAE) which was unrelated to the study drug
Summary

- Treatment of symptomatic acute hepatitis C with sofosbuvir/ledipasvir (FDC) was safe and well tolerated.

- Short treatment of only 6 weeks was highly effective with an SVR-12 rate of 100% in acute HCV genotype 1 mono-infected patients.

- High baseline viral load was associated with a delayed virological response – which however did not lead to treatment failures.

- A very rapid biochemical response was observed in patients with severe acute hepatitis C treated with an IFN-free regimen.
Conclusion

• The high efficacy of 6 weeks of IFN-free treatment of acute hepatitis C needs to be confirmed for other HCV genotypes and other treatment regimens

• Even shorter treatment durations remain to be studied

• Treatment of acute hepatitis C with IFN-free direct-acting antivirals may be considered in selected patients
  
  short-duration treatment of acute hepatitis C may
  - be cost-saving as compared to treatment of chronic hepatitis C
  - could prevent the spread of HCV in high risk populations
  - rapidly improve symptoms of acute hepatitis
Acknowledgement

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  Christoph Schröder

• Hannover Clinical Trial Center (HCTC)
  Armin Papkalla, Annette Busmann, Marcel Ohm, Heiko von der Leyen

• GILEAD Sciences
  Marzena Murawska, Rob Hyland
NVR 3-778, a First-in-class HBV Core Inhibitor, Alone and in Combination with Pegylated-interferon (peg-IFN alpha-2a), in Treatment-naïve HBeAg-positive Patients: Early Reductions in HBV DNA and HBeAg

M-F Yuen,¹ DJ Kim,² F Weilert,³ H L-Y Chan,⁴ J Lalezari,⁵ SG Hwang,⁶ T Nguyen,⁷ S Liaw,⁸ N Brown,⁸ K Klumpp,⁸ L Flores,⁸ G Hartman,⁸ EJ Gane⁹

¹Queen Mary Hospital, University of Hong Kong, Hong Kong; ²Hallym University, Chuncheon Sacred Heart Hospital, Gangwon-do, Republic of Korea; ³Waikato Hospital, Hamilton, New Zealand; ⁴Prince of Wales Hospital, Chinese University of Hong Kong, Hong Kong; ⁵Quest Clinical Research, San Francisco, CA, USA; ⁶CHA Bundang Medical Center, Gyeonggi-do, Republic of Korea; ⁷Research and Education, Inc., San Diego, CA, USA; ⁸Novira Therapeutics, Doylestown, PA, USA; ⁹Auckland Clinical Studies, Auckland, New Zealand
Slides are not available for Professor Man-Fung Yuen’s presentation
Norursodeoxycholic acid improves cholestasis in primary sclerosing cholangitis: results of a phase II dose finding study

Professor Michael Trauner, Medical University Vienna, Austria
Abstract number: LB02
Ursodeoxycholic Acid Improves Cholestasis in Primary Sclerosing Cholangitis: Results of a Phase II Dose Finding Study


Sponsor: Dr. Falk Pharma GmbH, Freiburg, Germany
• Primary sclerosing cholangitis (PSC) is a devastating chronic inflammatory, fibro-obliteratorive bile duct disease lacking effective medical therapy

• The role of ursodeoxycholic acid (UDCA) in the therapy of PSC is still under debate

- **Incidence:** 1-16 / 100,000
- **Age of onset:** 30-40 y/o 60-70% male
- **LTx-free survival:** 13-21 yrs 50% LTx (10-15yrs)

Hirschfield et al., *Lancet* 2013
Halilbasic et al., *Dig Dis* 2015
Background (2)

- 24-norursodeoxycholic acid (norUDCA) is a side chain-shortened C$_{23}$ homologue of UDCA which undergoes cholehepatic shunting.

- norUDCA has anti-cholestatic, anti-inflammatory and anti-fibrotic properties in mouse preclinical models of liver injury with features of PSC.

Yoon et al., *Gastroenterology* 1986

Fickert et al., *Gastroenterology* 2006
Background (3): Mechanisms of norUDCA Action in Preclinical Mouse Studies

- Bile acid (BA) Detoxification & Alternative Export
- Anti-proliferative
- Anti-inflammatory
- Anti-fibrotic

Hepatocyte

Intrahepatic enrichment

norUDCA

Anti-inflammatory

Bile Duct

HCO$_3^-$

Fickert et al., Gastroenterology 2006
Halilbasic et al., Hepatology 2009
Moustafa et al., Gastroenterology 2012
Fickert et al., J Hepatol 2013
Sombetzki et al., J Hepatol 2015
Study Design

Double-blind, randomized, placebo-controlled Phase II dose-finding study

3 doses vs. placebo

UDCA naïve or Following 8 wks UDCA Washout

Screening

Randomization

Placebo

norUDCA 500 mg/d

norUDCA 1000 mg/d

norUDCA 1500 mg/d

Follow up

norUDCA Washout

Timeline

W0 Baseline

W2

W4

W6

W8

W10

W12 EOT

W16

day -70

-14

2

4 wks
European Multicenter *nor*UDCA Trial
NUC-3/PSC Study Sites

No. Patients: 161 randomized
Number of Countries: 12
Number of Centres: 45
Efficacy Endpoints

• Primary efficacy endpoint
  – Mean relative change (%) in serum Alkaline Phosphatase (ALP) between the baseline visit and the end of treatment (EOT) visit

• Secondary efficacy endpoints
  – Proportion of patients with partial normalisation of ALP (< 1.5 ULN)
  – GGT, AST, ALT and serum bilirubin levels
  – Course of pruritus, fatigue, Clinical Activity Index (CAI), in patients with ulcerative colitis
**norUDCA Reduces ALP in a Dose-dependent Fashion**

ALP (%) Mean Change From Baseline to EOT (ITT)

![Bar graph showing change in ALP for different dosages of norUDCA.]

- **PLACEBO (N=40)**: +1.2%
- **NU 500mg (N=39)**: -12.3%, p = 0.0029
- **NU 1000mg (N=41)**: -17.3%, p = 0.0003
- **NU 1500mg (N=39)**: -26%, p < 0.0001

Values (%) are means (SD)

- Similar findings for other lab values (GGT, ALT, AST, GLDH)
- Similar response in UDCA responders vs. non-responders
Safety: Patients with Adverse Events (AEs) or with AEs Documented as Adverse Drug Reactions (ADR)

<table>
<thead>
<tr>
<th></th>
<th>AEs</th>
<th>ADRs</th>
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<tr>
<td>PLAC (N=40)</td>
<td>80%</td>
<td>28%</td>
</tr>
<tr>
<td>NU500 (N=39)</td>
<td>59%</td>
<td>23%</td>
</tr>
<tr>
<td>NU1000 (N=41)</td>
<td>73%</td>
<td>32%</td>
</tr>
<tr>
<td>NU1500 (N=39)</td>
<td>67%</td>
<td>28%</td>
</tr>
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</table>
norUDCA Phase II in PSC
Summary and Conclusions

• norUDCA resulted in a significant reduction of serum ALP values within 12 weeks of treatment compared to placebo

• The effect occurred in a dose-dependent manner with the highest effect at 1500 mg/d

• Safety profile of norUDCA did not differ from placebo

• Based on these results a phase III in PSC is in preparation
High Rate of SVR in Adolescents Treated With the Combination of Ledipasvir/Sofosbuvir

Kathleen Schwarz¹, Karen F. Murray², Philip Rosenthal³, Sanjay Bansal⁴, Chuan-Hao Lin⁵, Liyun Ni⁶, Bittoo Kanwar⁶, Jenna Fraser⁶, Polina German⁶, Diana M. Brainard⁶, Jessica Wen⁷, Regino Gonzalez-Peralta⁸, Maureen M. Jonas⁹, William Balistreri¹⁰

¹Johns Hopkins University School of Medicine, Baltimore, Maryland, USA; ²Seattle Children's Hospital, Seattle, Washington, USA; ³University of California San Francisco, San Francisco, California, USA; ⁴Kings College Hospital, London, United Kingdom; ⁵Children's Hospital Los Angeles, Los Angeles, California, USA; ⁶Gilead Sciences, Inc. Foster City, California, USA; ⁷The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, USA; ⁸University of Florida, Gainesville, Florida, USA; ⁹Boston Children's Hospital, Boston, Massachusetts, USA; ¹⁰Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA

EASL 2016, Barcelona
Disclosures

♦ This study was sponsored by Gilead
Background and Study Aims
LDV/SOF in Adolescents

- The estimated prevalence of HCV infection in children is up to 0.4% in Europe and US and up to 6% in resource-limited countries\textsuperscript{1-3}

- Direct-acting antivirals (DAAs) have transformed the treatment of adults with chronic HCV

- The standard of care for adolescents and younger children is still limited to pegylated interferon + ribavirin (RBV) treatment for 24 to 48 weeks\textsuperscript{1-3}

- The aims of this study are to evaluate safety, efficacy, and pharmacokinetics of ledipasvir/sofosbuvir (LDV/SOF) in pediatric patients with chronic HCV

Study Endpoints
LDV/SOF in Adolescents

♦ Primary objective is safety and tolerability of LDV/SOF
  – Primary safety endpoint: adverse events leading to discontinuation of study drug

♦ Secondary objectives include antiviral efficacy
  – Key efficacy endpoint: SVR12

♦ Pharmacokinetics (PK) objectives include evaluation of LDV and SOF
  PK relative to adults and dose confirmation
  – PK endpoints: steady state exposure LDV, SOF and its primary metabolite
Study Design
LDV/SOF in Adolescents

- Open-label study in adolescents aged 12 to 17 years
- Treatment-naïve and -experienced patients eligible
- Diagnosis of cirrhosis based on biopsy, but not required for enrollment
- PK lead-in in first 10 patients to confirm dose
- Conducted at 24 sites in UK, US, and Australia

N=100
LDV/SOF 90/400 mg
SVR12
## Results: Demographics

**LDV/SOF in Adolescents**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td><strong>Mean age, y (range)</strong></td>
<td>15 (12–17)</td>
</tr>
<tr>
<td><strong>Male, n (%)</strong></td>
<td>37 (37)</td>
</tr>
<tr>
<td><strong>White, n (%)</strong></td>
<td>90 (90)</td>
</tr>
<tr>
<td><strong>Mean weight, kg (range)</strong></td>
<td>61 (33–126)</td>
</tr>
<tr>
<td><strong>Mean BMI, kg/m² (range)</strong></td>
<td>23 (13–37)</td>
</tr>
<tr>
<td><strong>HCV GT 1a, n (%)</strong></td>
<td>81 (81)</td>
</tr>
<tr>
<td><strong>Mean baseline HCV RNA, log_{10} IU/mL (range)</strong></td>
<td>6.0 (4.7–7.0)</td>
</tr>
<tr>
<td><strong>HCV RNA ≥800,000 IU/mL, n (%)</strong></td>
<td>55 (55)</td>
</tr>
<tr>
<td><strong>Treatment experienced, n (%)</strong></td>
<td>20 (20)</td>
</tr>
<tr>
<td><strong>Cirrhosis, n (%)</strong></td>
<td>1 (1)</td>
</tr>
<tr>
<td><strong>IL28B CC, n (%)</strong></td>
<td>24 (24)</td>
</tr>
<tr>
<td><strong>Vertical transmission (infected mother), n (%)</strong></td>
<td>84 (84)</td>
</tr>
</tbody>
</table>
Results: SVR12 in Adolescents With HCV GT 1

- The only treatment-naïve patient with cirrhosis achieved SVR12

Error bars represent 95% confidence intervals.
### Results: Overall Safety

**LDV/SOF in Adolescents**

<table>
<thead>
<tr>
<th>Overall Safety</th>
<th>LDV/SOF 12 Weeks N=100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patients, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Any AE</td>
<td>72 (72)</td>
</tr>
<tr>
<td>Grade 3–4 AE</td>
<td>0</td>
</tr>
<tr>
<td>Serious AE</td>
<td>0</td>
</tr>
<tr>
<td>Treatment discontinuation due to AE</td>
<td>0</td>
</tr>
<tr>
<td><strong>Laboratory Abnormalities</strong></td>
<td></td>
</tr>
<tr>
<td>Grade 3–4*</td>
<td>9 (9)</td>
</tr>
<tr>
<td>Hemoglobin &lt;10 g/dL</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Hemoglobin &lt;8.5 g/dL</td>
<td>0</td>
</tr>
</tbody>
</table>

*Asymptomatic, transient amylase elevation only Grade 3/4 laboratory abnormality that occurred in >1 patient (n=3).
Results: Adverse Events in ≥10% LDV/SOF in Adolescents

<table>
<thead>
<tr>
<th>Patients, n (%)</th>
<th>LDV/SOF 12 Weeks N=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>27 (27)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>14 (14)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>13 (13)</td>
</tr>
<tr>
<td>Nausea</td>
<td>12 (12)</td>
</tr>
<tr>
<td>Cough</td>
<td>10 (10)</td>
</tr>
<tr>
<td>Oropharyngeal pain</td>
<td>10 (10)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>10 (10)</td>
</tr>
</tbody>
</table>
Conclusions
LDV/SOF in Adolescents

- Treatment with LDV/SOF (90/400 mg) for 12 weeks resulted in an SVR12 rate of 97% in adolescent patients with HCV GT 1
  - No virologic failures

- LDV/SOF was well tolerated
  - No grade 3–4 adverse events, serious adverse events, or treatment discontinuations due to adverse events

- Study ongoing in children aged 3 to <12 years

- LDV/SOF represents an important treatment option for adolescent patients with chronic HCV infection
Questions and answers
Thank you