



TRANSFORMING MEDICINE RESTORING WELLBEING

DURECT Corporation

A Biopharmaceutical Company

May 25, 2019

Forward-Looking Statements

The statements in this presentation regarding DURECT's and its collaborative partners' products in development, anticipated product benefits, anticipated product markets, clinical trial results and plans, DURECT's future business plans and projected financial results and DURECT's emergence as an innovative biopharmaceuticals company are forward-looking statements involving risks and uncertainties that can cause actual results to differ materially from those in such forward-looking statements. Potential risks and uncertainties include, but are not limited to, DURECT's (and that of its third-party collaborators', where applicable) abilities to successfully enroll and complete clinical trials, complete the design, development, and manufacturing process development of the product candidates, obtain product and manufacturing approvals from regulatory agencies and manufacture and commercialize the product candidates and marketplace acceptance of the product candidates, as well as DURECT's ability to fund its growth and operations. Further information regarding these and other risks is included in DURECT's most recent Annual or Quarterly Report on Form 10-K or 10-Q filed with the SEC under the heading "Risk Factors."

DURECT Company Highlights

01

Biotechnology: DUR-928, a New Class of Therapeutics in Phase 2

Epigenetic Regulator with potential to treat Alcoholic Hepatitis & other Acute Organ Injuries, NASH, Psoriasis & other Diseases

02

Drug Delivery: Development Programs, Partnerships, Approved Products, and Cash Flow Positive Product Lines

POSIMIR® (bupivacaine extended-release solution), PERSERIS™ by Indivior, ALZET® & LACTEL®

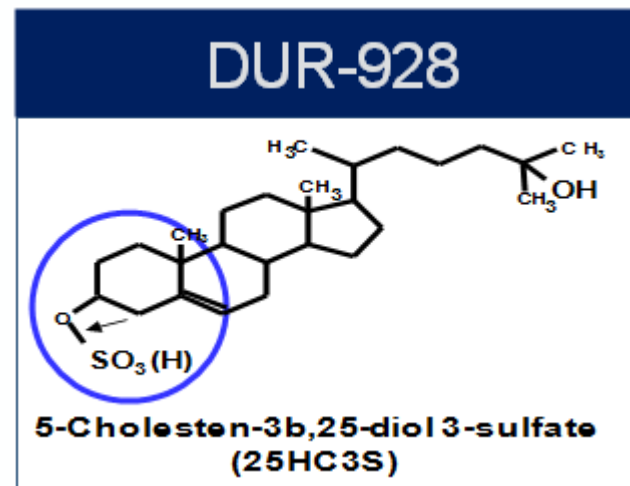
03

Multiple Potential Value-Creating Catalysts in 2019

DUR-928: Lead compound in DURECT's Epigenetic Regulator Program

DUR-928:

- **Sulfated** oxysterol, a new class of therapeutics with novel MOA
- Endogenous , small molecule
 - Highly conserved across 7 mammalian animal species
 - Apparent wide therapeutic index
- Epigenetic regulator
 - Does not change the DNA sequence, but modifies gene activity
- Broad activity
 - Regulates metabolism, inflammation, autophagy & cell survival
- Safety
 - Over 150 individuals dosed to date in multiple Phase 1 trials
 - Well tolerated at all doses by either oral, IM or IV dosing
 - Minimal food effect and no accumulation with repeat dosing in Phase 1 subjects



DUR-928
Potential in Alcoholic Hepatitis (AH)

Alcoholic Hepatitis (AH) Overview

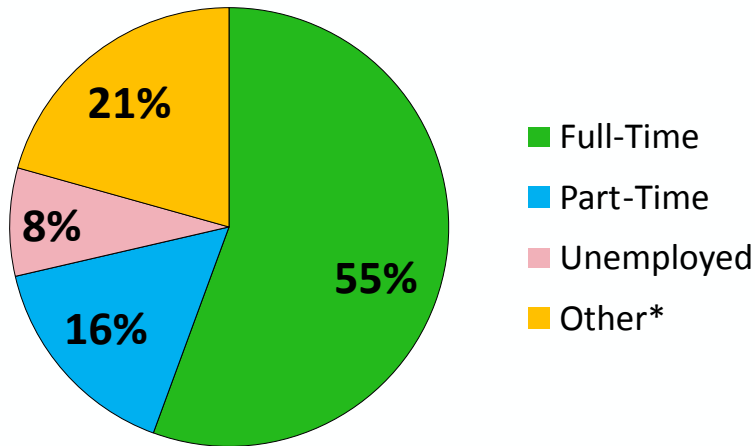


- Acute form of alcoholic liver disease (ALD)
- AH is characterized by inflammation and hepatocellular injury
- AH is believed to occur in 10-35% of heavy drinkers ¹
- ~ 320,000 AH-related hospitalizations in the U.S.²
 - Hospitalization cost of nearly **\$50,000 per patient**
 - Short term **mortality rate of 30%-50%** in severe cases
- 50% of all cases of cirrhosis have alcohol contribution ³
- Alcohol Use Disorder (AUD) in the U.S. affects 15.1 million adults (6.2%) ⁴
- **No approved treatment**
- ALD is a leading cause of liver transplants in the US ⁵
 - The cost of a **liver transplant exceeds \$800,000** ⁶

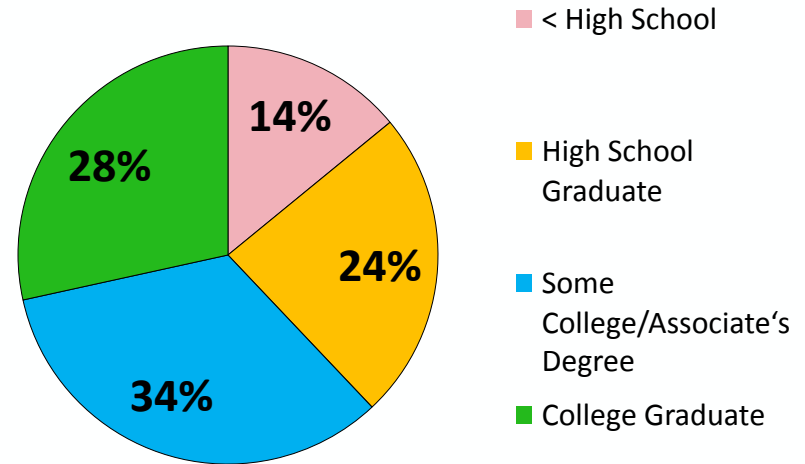
(1) AASLD Practice Guidelines: Alcoholic Liver Disease. Hepatology. 2010 Vol. 51, No(1) 307-328.; (2) Hospitalizations in 2010 with a primary or secondary diagnosis of AH. J Clin Gastroenterology. 2015 July; 49(6): 506-511. (2) Journal of Hepatology 2018 vol. 69 j 534–543. (3) ACG Clinical Guideline: Alcoholic Liver Disease. The American Journal of GASTROENTEROLOGY. January 2018; doi: 10.1038/ajg.2017.469. (4) <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-facts-and-statistics> accessed April 2, 2019; (5) Am J Gastroenterol. 2018 Nov;113(11):1649-1659. doi: 10.1038/s41395-018-0088-6. (6) CVRG , "NAFL/NASH 2019 – 2028", March 31, 2019.

U.S. Patients with Alcohol Use Disorder¹

Employment Status



Education



*The Other Employment category includes students, persons keeping house or caring for children full time, retired or disabled persons, or other persons not in the labor force.

Alcoholic Hepatitis (AH) Overview

AH is a leading cause of liver transplant in the US. ¹

AH is a substantial unmet medical need with a short term mortality rate greater than some cancers ²

Disease	One Month Mortality
Acute Myeloid Leukemia	16-29%
Advanced Breast cancer ³	13%
Advanced Pancreatic cancer ⁴	23% (3 months)
Moderate AH	20%
Severe AH	40%

¹ [Am J Gastroenterol](#). 2018 Nov;113(11):1649-1659. doi: 10.1038/s41395-018-0088-6. Epub 2018 Jun 8, ² [NIH Fact Sheets Home](#) > Cancer, ³ [Acta Oncology](#) 2008, 47 PMID 17957501, ⁴The Oncologist Feb. 2017



ELSEVIER

Available online at www.sciencedirect.com

Metabolism

www.metabolismjournal.com



Cholesterol metabolites alleviate injured liver function and decrease mortality in an LPS-induced mouse model



Yanxia Ning, Jin Kyung Kim, Hae-Ki Min, Shunlin Ren*

Department of Internal Medicine, Virginia Commonwealth University/McGuire Veterans Affairs Medical Center, Richmond, VA 23249, United States

Alcoholic Hepatitis (AH) Phase 2a Study Design

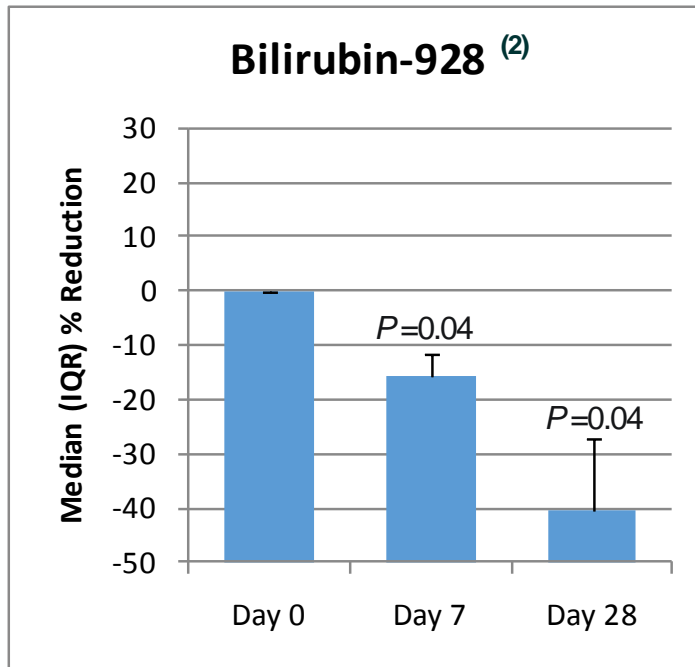
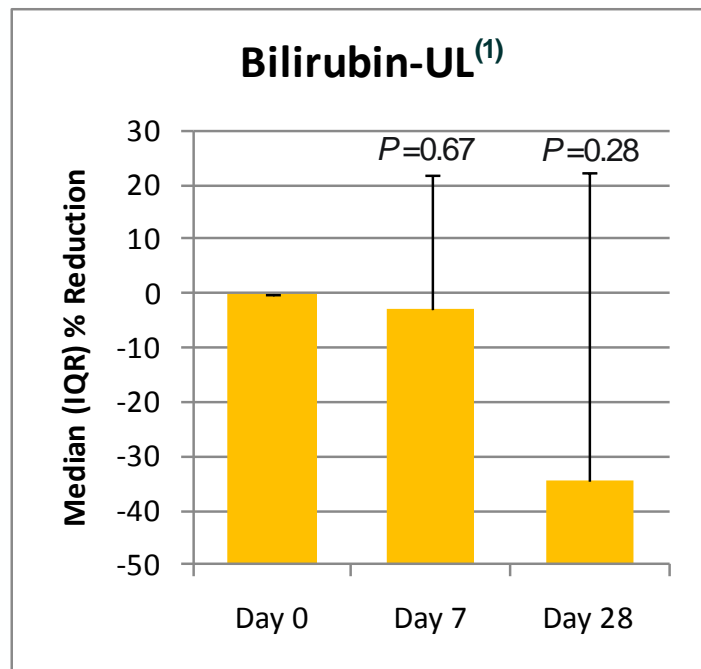
An Open-Label, Dose Escalation Study to Assess the Safety, PK, and PD Signals of I.V. dosed DUR-928 in Patients with AH

	Cohort	1	2	3
Moderate AH MELD 11-20 (n=4 per group)	A	30 mg	90 mg	150 mg
Severe AH MELD 21-30 (n=4 per group)	B	30 mg	90 mg	150 mg

- Through the first 10 patients, enrollment in severe patients has been faster than in moderate patients

DUR-928 Preliminary AH Data Compared with UL Data

Early Bilirubin Change

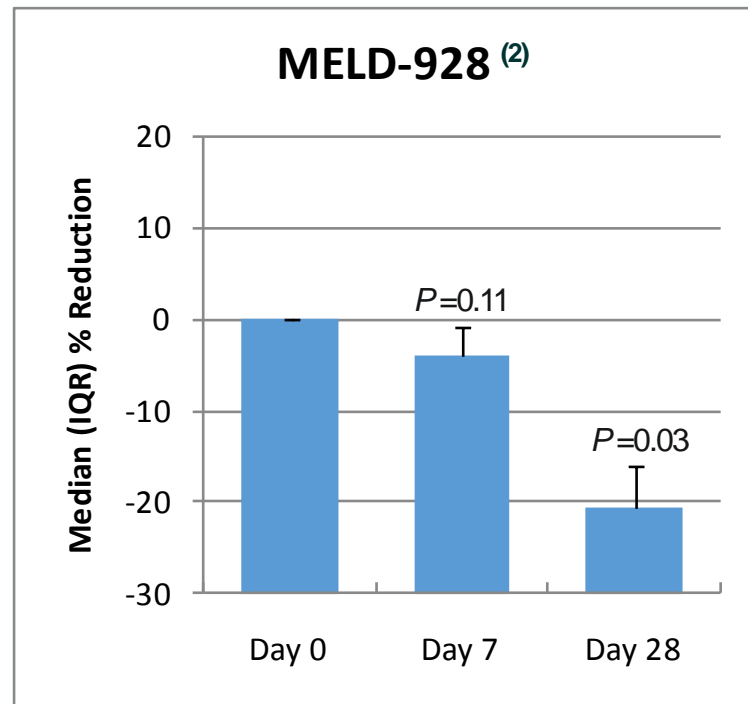
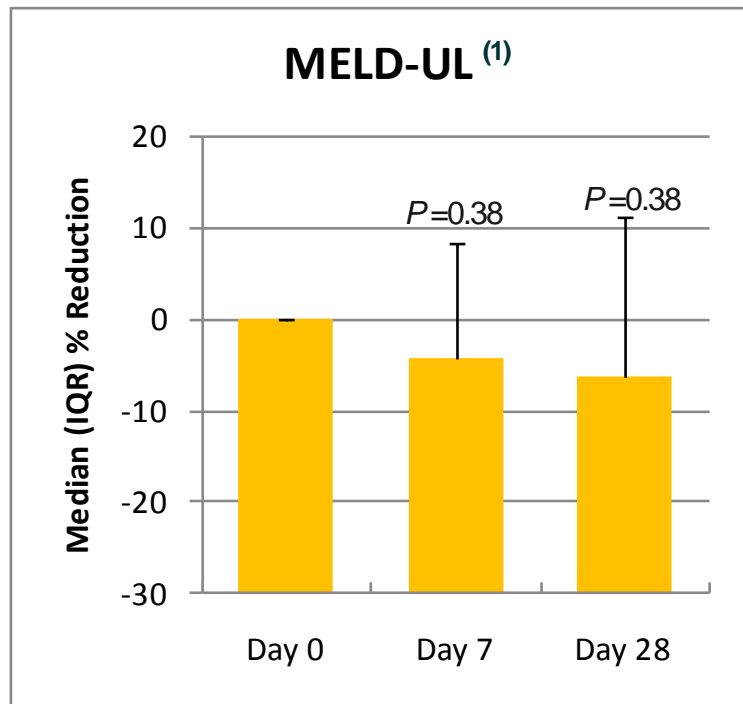


(1) Anonymized data provided by Dr. Craig McClain from the University of Louisville (UL) from his separate study, in which 15 AH patients with initial MELD scores ranging from 15-30 received either supportive care alone (n=8) or supportive care with corticosteroids (n=7). Provided as historical control data.

(2) Preliminary data from the first ten AH patients dosed with DUR-928 in the ongoing open label, dose-escalation, multi-center U.S. Phase 2a trial. Eight patients (4 moderate and 4 severe) were treated with DUR-98 at the 30 mg dose, and two patients (1 moderate and 1 severe) at the 90 mg dose. Day 0 (n=10), Day 7 (n=9), Day 28 (n=8).

DUR-928 Preliminary AH Data Compared with UL Data

Change in MELD Score (based on: *bilirubin*, *INR*, and *sCr*)



(1) Anonymized data provided by Dr. Craig McClain from the University of Louisville (UL) from his separate study, in which 15 AH patients with initial MELD scores ranging from 15-30 received either supportive care alone (n=8) or supportive care with corticosteroids (n=7). Provided as historical control data.

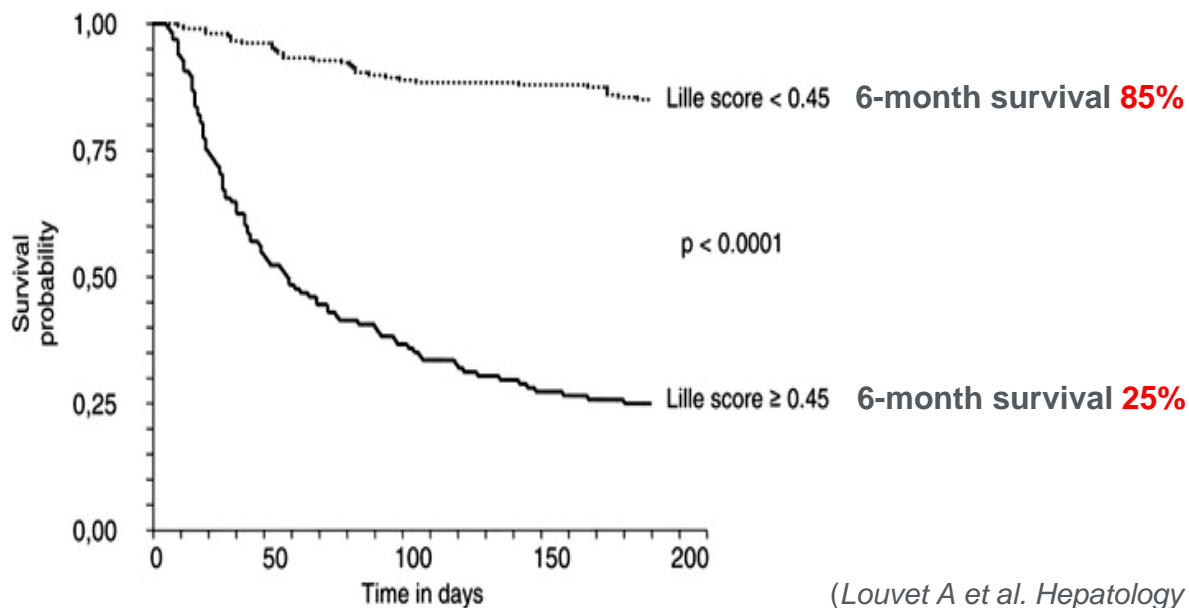
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Lille Model

Composite score used to determine how well a therapy is working after 7 days; prognostic indicator of mortality

% Survival (6-month) with a Lille score of \geq 0.45 vs. $<$ 0.45

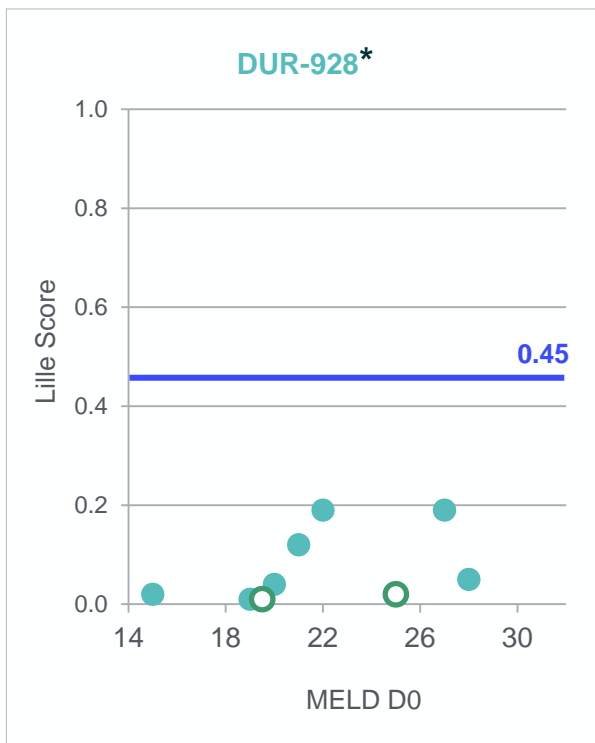
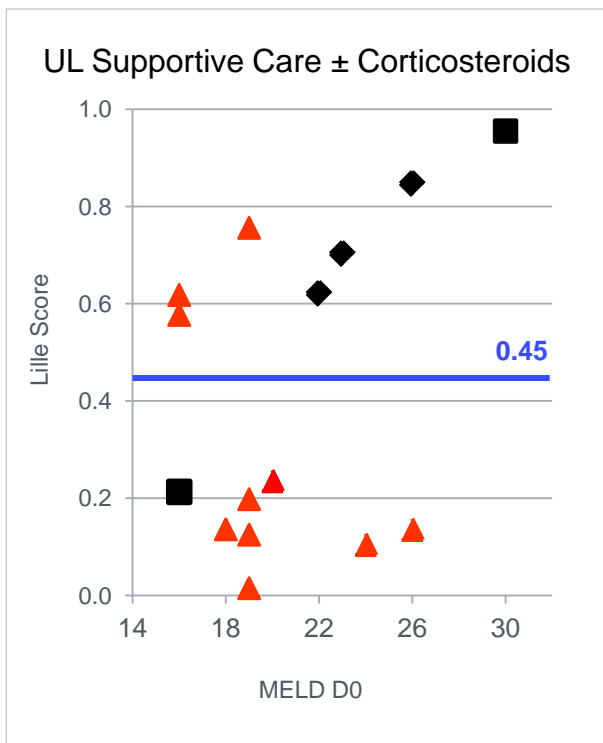
Lille Model Score Calculated based on:
Age
baseline albumin
baseline sCr
baseline prothrombin (s)
baseline bilirubin
(Day7-Day1) bilirubin



(Louvet A et al. Hepatology 2007; 45: 1348-54)

DUR-928 Preliminary AH Data Compared with UL Data

MELD Score (Day 0) and Lille Response (Day 7)

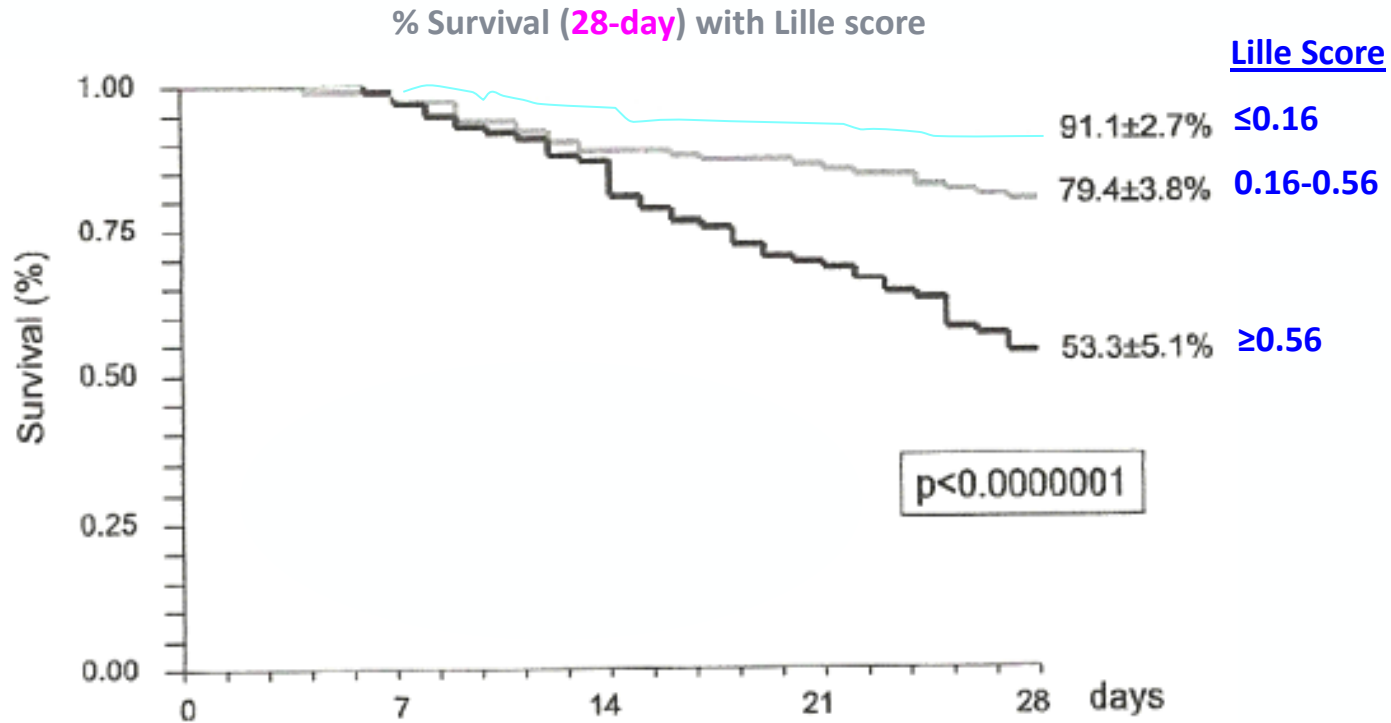


- UL Patient died in 1 month
- ◆ UL Patient died in 2-3 months
- ▲ UL Patient
- 30 mg DUR-928
- 90 mg DUR-928

	Lille Range	Median Lille
DUR-928	0.01-0.19	0.04
UL	0.02-0.96	0.41

* P=0.002 DUR-928 compared to U. of Louisville AH Trial (historical control)

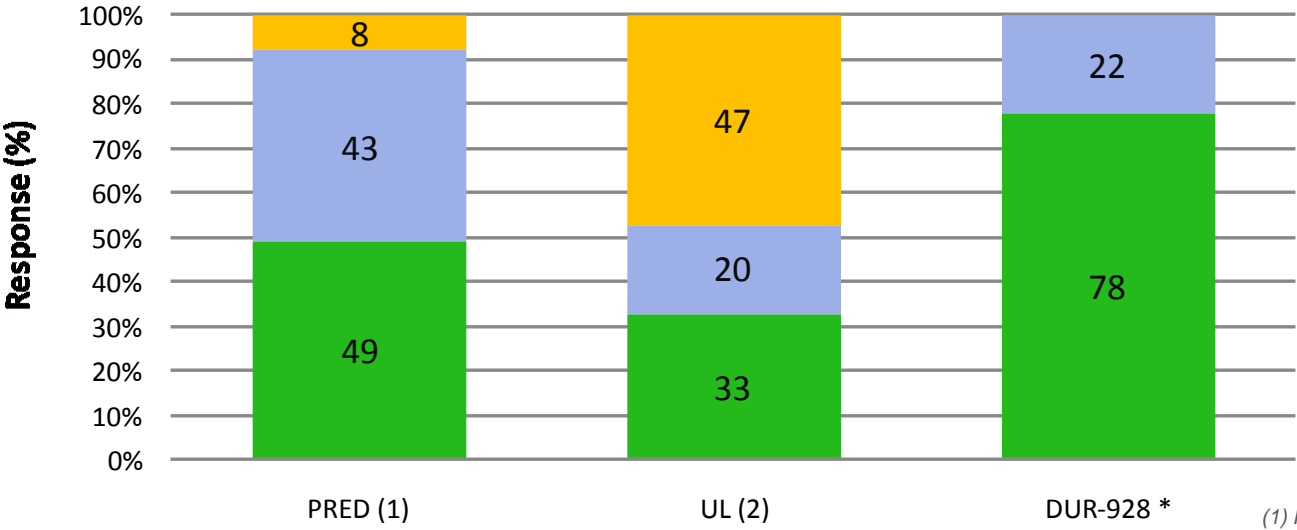
Lille Model Scores After Dosing



(Methurin P. et al. Gut 2011; 60:255-260)

DUR-928 Preliminary AH Data compared with Data from Other Studies

% of AH Patients in Each Classification



■ Complete Responders Lille: ≤ 0.16
■ Partial Responders 0.16-0.56
 ■ Null Responders ≥ 0.56

* P-value 0.002 DUR-928 compared to U. of Louisville AH Trial (historical control)

Code	Treatment	n
PRED	Prednisolone	51
UL	\pm corticosteroids	15
928	DUR-928	9*

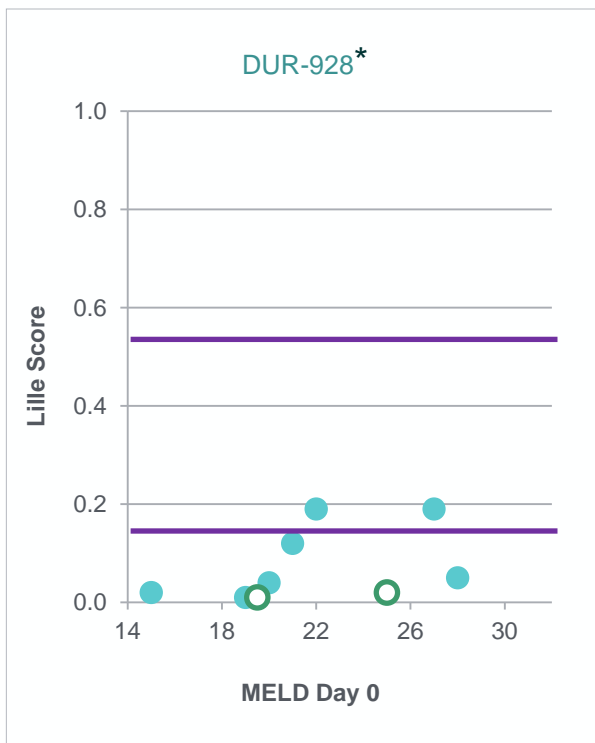
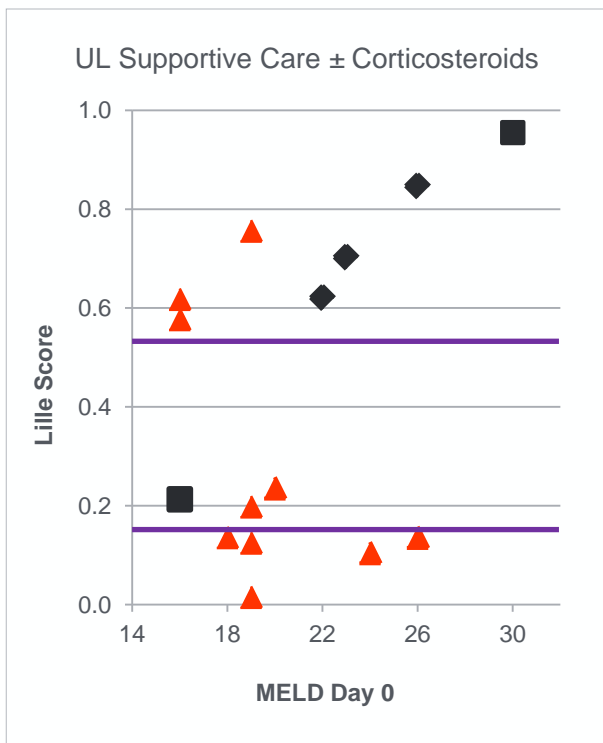
	Lille Range	Median Lille
DUR-928	0.01-0.19	0.04
UL	0.02-0.96	0.41

(1) Mathurin, "Selonsertib in Combination with Prednisolone for the Treatment of Severe Alcoholic Hepatitis: A Phase 2 Randomized Controlled Trial" presented at AASLD November 2018. The table presents patients from the control group – all treated with corticosteroids (prednisolone + placebo). Initial MELD scores in this study ranged from 19 to 24.

(2) See footnote 1 on next slide

DUR-928 Preliminary AH Data compared with UL Data (1)

MELD Score (Day 0) and Lille Response (Day 7)



- UL Patient died in 1 month
 - ◆ UL Patient died in 2-3 months
 - ▲ UL Patient
 - 30 mg DUR-928
 - 90 mg DUR-928
- Null
- Partial Response
- Complete Response

* P-value 0.002 DUR-928 compared to U. of Louisville AH Trial (historical control)

(1) Anonymized data provided by Dr. Craig McClain from the University of Louisville (UL) from his separate study, in which 15 AH patients with initial MELD scores ranging from 15-30 received either supportive care alone (n=8) or supportive care with corticosteroids (n=7). Provided as historical control data.

Encouraging Data from First 10 Patients in Alcoholic Hepatitis (AH)

Lille Scores

- Composite score based on: age, albumin, serum creatinine (sCr), prothombin time, change in bilirubin from day 1 to 7
- Prognosticator of mortality; used to determine how well a therapy is working after 7 days
- **Significantly lower Lille scores than historical control**

MELD (Model of End Stage Liver Disease)

- Composite score based on: sCr, bilirubin and International Normalized Ratio (INR)
- Prognostic indicator of mortality; used to help determine priority on liver transplant waiting list
- **Significant reduction in MELD compared to baseline at day 28**

Bilirubin

- High levels of bilirubin may be associated with impaired liver function
- Reductions seen in bilirubin have been observed in our NASH Phase 1b single-dose trial, Impaired kidney function Phase 1b single-dose trial and multiple animal models
- **Significant reduction in Bilirubin compared to baseline at days 7 and 28**

Alcoholic Hepatitis (AH) Phase 2a Study Summary

01

Significant unmet need with 320,000 hospitalizations per year and no approved treatments, resulting in high mortality rates and hospitalization costs. ALD is a leading cause of liver transplants in the US, each of which costs >\$800,000.

02

Compelling survival data in multiple acute liver animal models.

03

Positive preliminary clinical data from the first 10 AH patients dosed with DUR-928 - reductions of serum bilirubin and MELD, low Lille scores; good safety profile. No drug related safety issues through the first 10 patients dosed. Potential to be life saving therapy.

04

This year we are anticipating data from remaining patients and plan to request a meeting with FDA to establish the path to approval.

05

Potential pivotal trial to begin in 2020

DUR-928
Potential in NASH

NASH

Nonalcoholic Steatohepatitis Overview



Affects 3-5% of the US population; expected to increase ~2x by 2030



Worldwide surge in obesity fueling increasing prevalence of NAFLD and NASH



There are no treatments currently approved for NASH



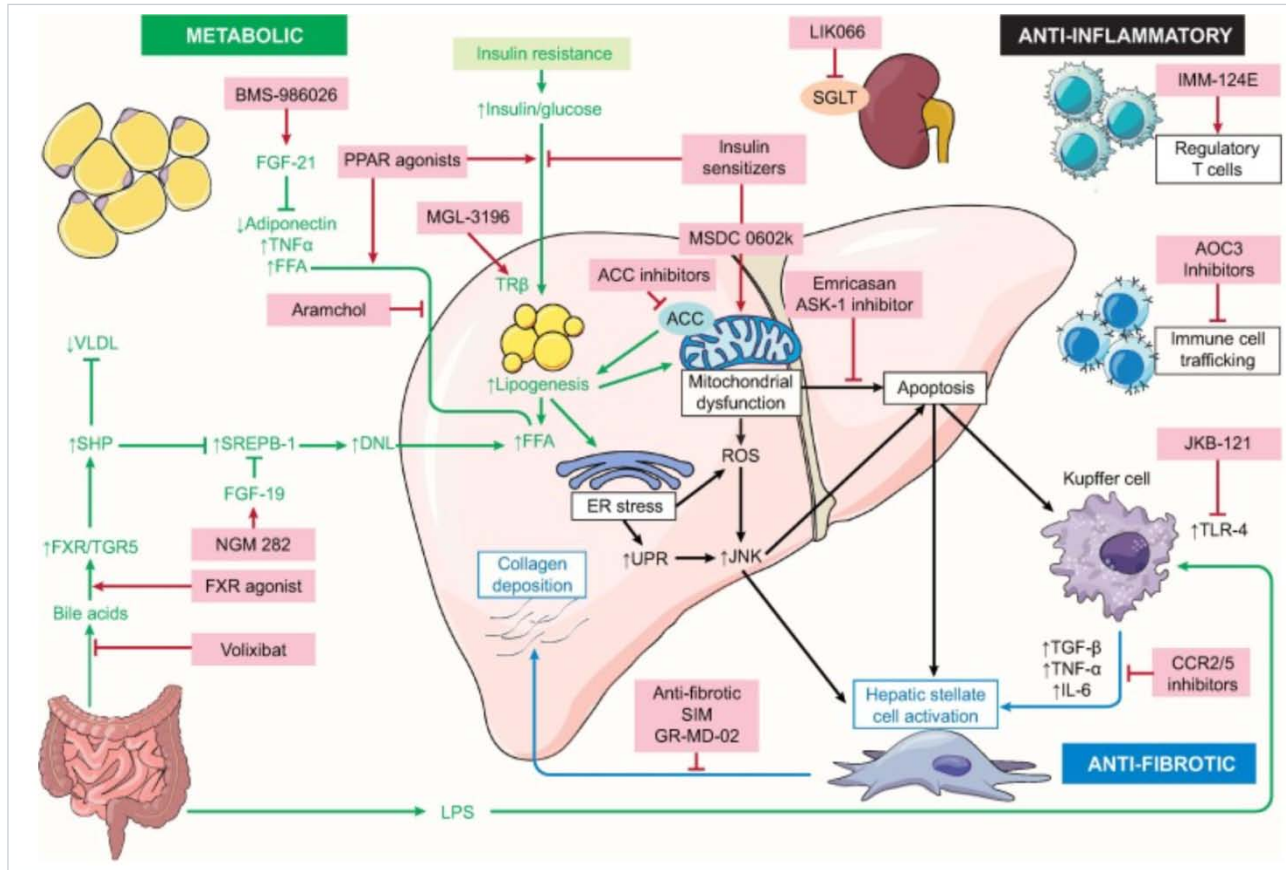
NASH and ALD are the leading causes of liver transplants in the U.S.



Total direct costs of illness for NASH will continue to be substantial with annual predicted economic burden of NASH with and without fibrosis estimated to be >\$10B in the U.S. and major European markets



Mechanisms of Action of Potential Treatments for NASH are Complex



DUR-928 Phase 1b

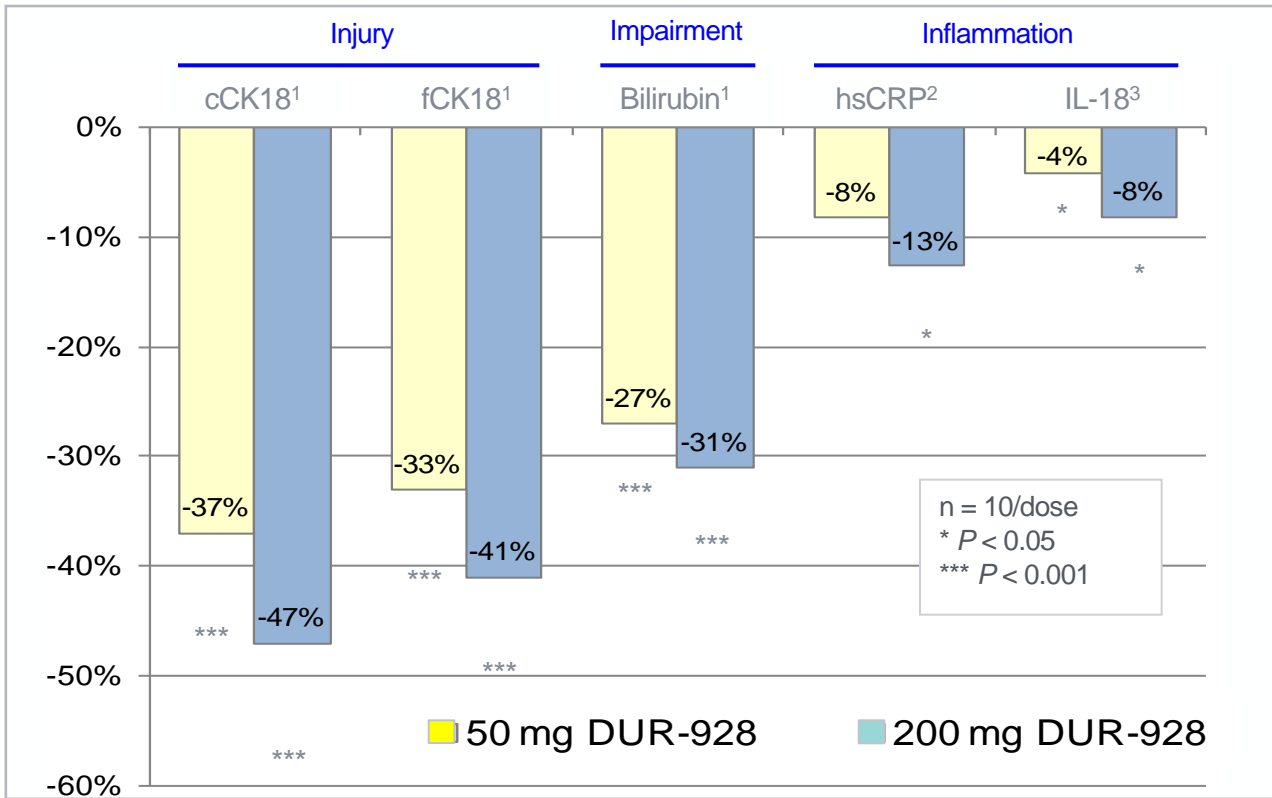
Initial Patient Study (NASH)

- Conducted in Australia, oral formulation
- 2 successive cohorts evaluating single doses of DUR-928:
- Each cohort had 10 NASH patients and 6 matched control subjects (by age, body mass index and gender, but with normal liver function)
- Single-site, open label, dose ranging safety and PK study
- Safety and PK results:
 - Safe and well tolerated, with one possibly treatment related serious adverse event (shortness of breath)
 - PK parameters between NASH patients and matched controls comparable

Biologic activity was observed after a single dose in both cohorts

Phase 1b: NASH Patient Study

Biomarker Changes in NASH Patients After a Single Oral Dose of DUR-928

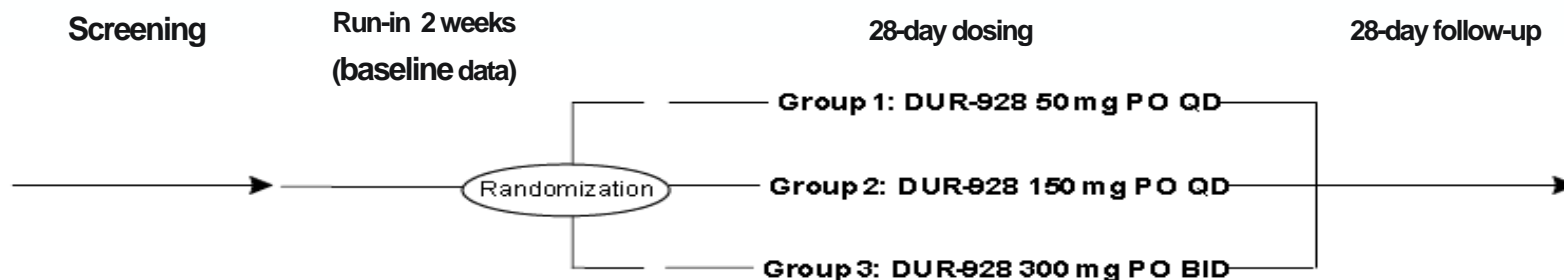


A single dose of 928 was able to reduce markers of cell injury, impairment and inflammation compared to baseline

1. The reductions of cCK-18, fCK-18, and bilirubin were the greatest at 12 hours after dosing
2. The reduction of hsCRP was more noticeable at 24 hours after dosing
3. The reduction of IL-18 was noticeable at 8 hours after dosing

Ongoing DUR-928 NASH Trial

- U.S., open-label, Phase 1b trial to evaluate safety, pharmacokinetics and signals of biological activity of orally-administered DUR-928 for 28 consecutive days in patients with NASH (fibrosis stage 1-3)
- N=60. Three groups of 20 patients will be administered either a low, middle or high dose
- Key endpoints include:
 - Safety / PK
 - Clinical chemistry and biomarkers (e.g., bilirubin, lipids, liver enzymes, CK-18s, inflammatory cytokines)
 - Imaging (e.g., MRI-PDFF)



Ongoing DUR-928 NASH Trial

Trial Objectives

- Collect Safety and PK data from 28-day daily dosing of DUR-928
- Determine potential early effects of daily dosing on important blood chemistry, biomarkers and liver fat
- Collect data to aid in the selection of dose(s) and regimen for a future Phase 2b
- Further establish the potential utility of DUR-928 for the treatment of NASH

DUR-928 NASH Summary

01

Significant unmet need with a worldwide surge in obesity fueling increasing prevalence of NAFLD and NASH and no approved treatments

02

Compelling steatosis, hepatocyte ballooning and fibrosis data in multiple NASH animal studies

03

Encouraging clinical results from NASH single-dose Phase 1b study showing reductions in CK-18s, bilirubin and certain inflammatory biomarkers

04

28-day multi-dose, dose-ranging study ongoing

05

Initial data announcement expected in 2H 2019

DUR-928
Potential in Psoriasis

Psoriasis

A chronic, non-infectious, inflammatory skin disorder with well defined, erythematous plaques and large adherent silvery scales

Age Onset

20-30y or 50-60y

Causes unknown

Genetic predisposition

Environmental trigger

Psoriasis



Psoriasis: Prevalence & Severity

Psoriasis occurs in 2% of the world's population

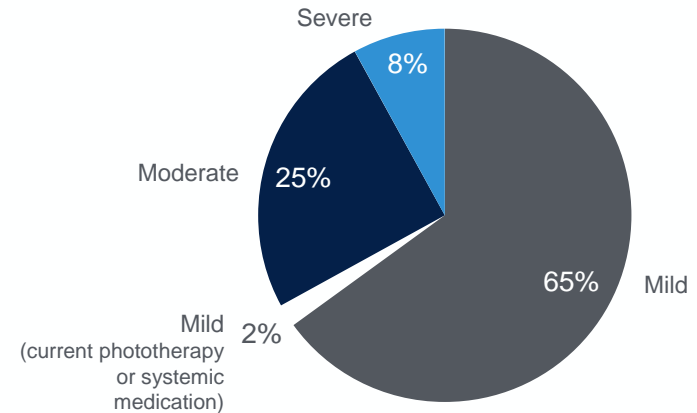
Estimated at 3.2% in adults 20 years or older in US (7.4 million adults)

Over 90% of patients estimated to have localized disease

Has significant impact on quality of life

Severity	% of Body Surface	Category
Mild	Up to 3%	Localized
Moderate	3% - 10%	
Severe	> 10%	Generalized

Distribution of psoriasis severity

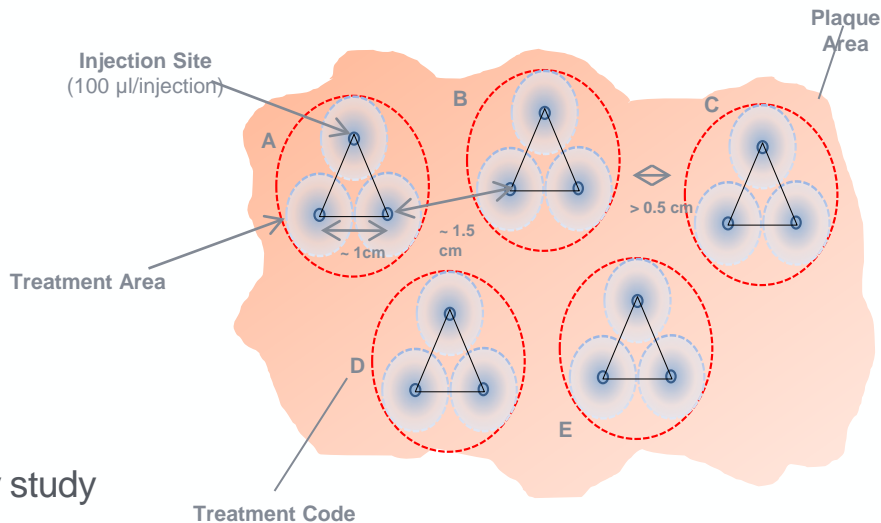


Source: National Psoriasis Foundation (random sample of 278 adults with psoriasis)

Rationale for Psoriasis

Phase 1b: Initial Patient Study (Psoriasis)

- Conducted in Australia, intralesional injection
- Evaluating a single dose of DUR-928:
 - 9 psoriatic patients (moderate to severe)
 - Micro-plaque assay, self-control
 - 2 formulations, double-blinded, safety and efficacy study
 - Kenalog as positive control
 - Evaluated LPSI (local psoriasis severity index) scores



Encouraging activity led to the current Phase 2a proof-of-concept study with topically applied DUR-928

DUR-928 Psoriasis Phase 2a Trial

Proof-of-concept trial with topical DUR-928 in mild to moderate plaque psoriasis patients



- U.S., multicenter, randomized, double-blind, vehicle-controlled
- Patients serve as their own controls – patients have similar plaque on each arm
- Weekly visit for evaluation and photographs
- Primary endpoint: change from baseline on the Investigator's Global Assessment (IGA) Score

DUR-928 Psoriasis Summary

01

Topicals are first line therapy for the 90% of psoriasis patients with localized disease; up to 49% untreated

02

Encouraging data from completed Phase 1b micro-plaque study

03

Phase 2a proof-of-concept, 28-day multi-dose, double blind, vehicle controlled trial ongoing

04

Top line data announcement expected in 2H 2019

05

Potential partnering opportunity

Summary of 2019 DUR-928 Clinical Trials

Indication	Preclinical	Phase 1	Phase 2	Design/Timing	Patient Population
Alcoholic Hepatitis (Injectable)				Phase 2a open label, dose escalation study in moderate and severe AH patients, positive preliminary data , top line data expected 2H 2019	>320,000 hospitalized in the U.S. ³
Psoriasis (Topical)				Phase 2a proof-of-concept study, 28-day, multicenter, randomized, double-blind, vehicle-controlled. top line data expected 2H 2019	7.5 million in the U.S. ²
NASH (Oral)				28-day daily dosing, Phase 1b open-label study to evaluate safety, PK and signals of biological activity. initial data expected 2H 2019	9-16 million in the U.S. ¹

1. Estes C, et al. Hepatology, 2018;67:123-133. 2. National Psoriasis Foundation. 3. J Clin Gastroenterology. 2015 July; 49(6): 506-511

DUR-928 Summary

01

Impressive preliminary Lille, MELD and Bilirubin data from Phase 2a AH trial
Additional data in 2H 2019, potential for accelerated path to market if life saving therapy

02

28-day Psoriasis and NASH trials began Q1 with data read-outs in 2H 2019

03

High doses resulted in plasma levels >1,000-fold higher than endogenous levels, well tolerated at all doses

04

Oral, IV, IM and topical formulations, API manufacturing at commercial scale

05

Impressive results from more than 10 animal models

POSIMIR®
Potential in Post-Operative Pain

A photograph of several surgeons in an operating room, wearing blue scrubs, white masks, and blue surgical caps. They are looking down, focused on their work. The lighting is bright and clinical.

POSIMIR[®] (bupivacaine extended-release solution) Post-Operative Pain Control Utilizing SABER[®] Technology

- Non-Narcotic, up to 3 days of post-op pain control
- Investigational product designed for local control of post-surgical pain, plus reduced narcotic use and associated side effects and costs
- Plan to submit response to CRL in H1 2019, with potential NDA approval in 2019

POSIMIR has not been approved by the FDA for marketing in the U.S. for any indication. POSIMIR and SABER are trademarks of DURECT Corp.

POSIMIR[®]: Commercial Opportunity

>70 million surgeries

per year in the U.S.

~30 million procedures

as a potential available market

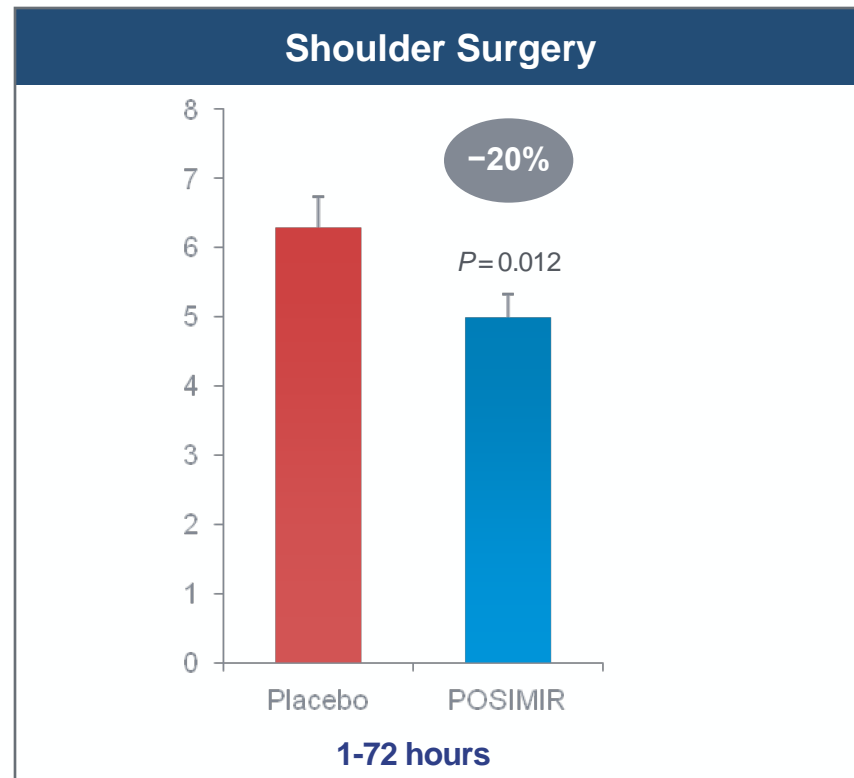
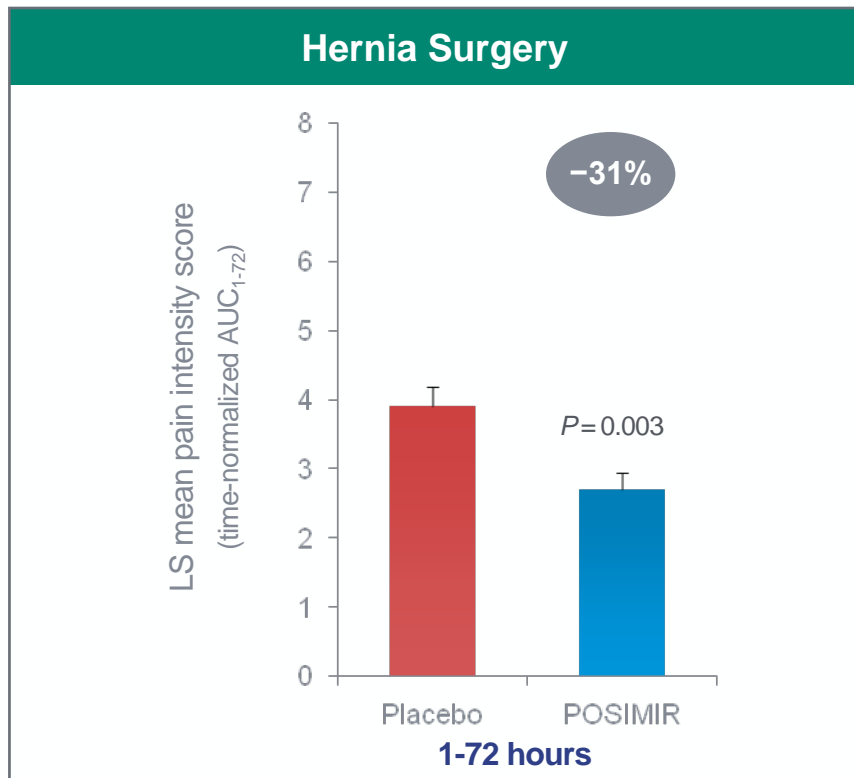
Large and underserved market

**Compelling product concept
for surgeons, anesthesiologists,
and payers to get behind**

- Patient quality of life
- Potentially large healthcare cost savings
- Simple administration technique
- Underlying desire for non-opioid, extended post-surgical pain relief

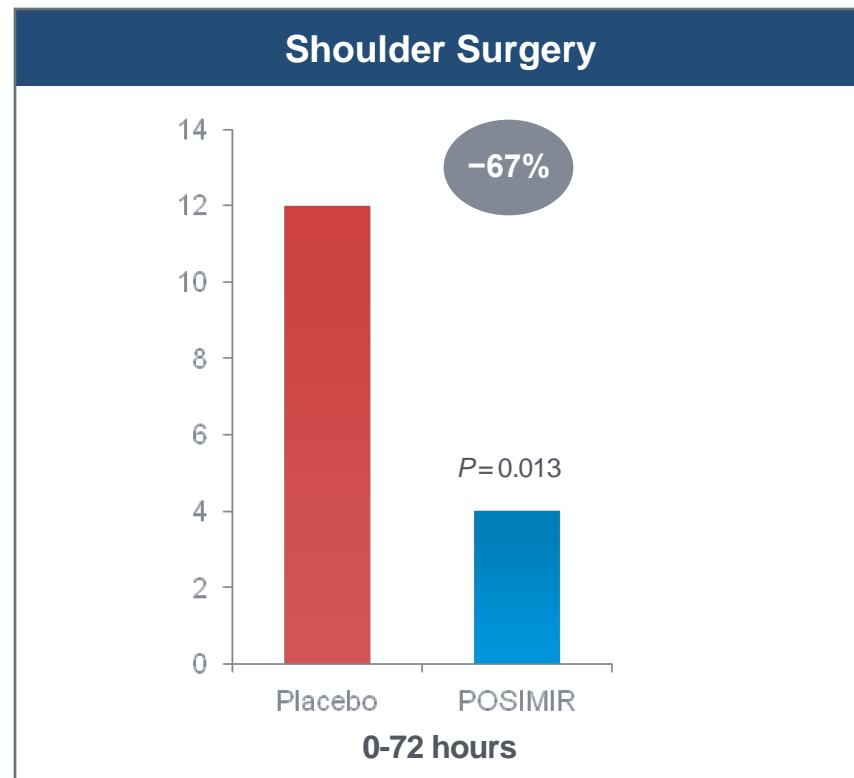
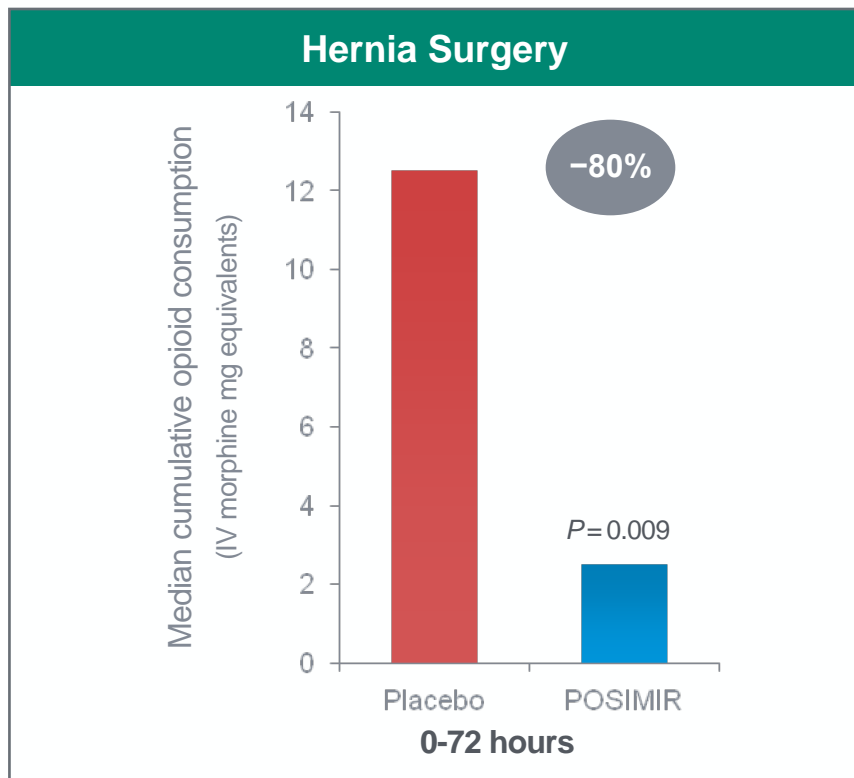
POSIMIR has not been approved by the FDA for marketing in the U.S. for any indication. POSIMIR and SABER are trademarks of DURECT Corp.

POSIMIR®: Reduction in Pain on Movement



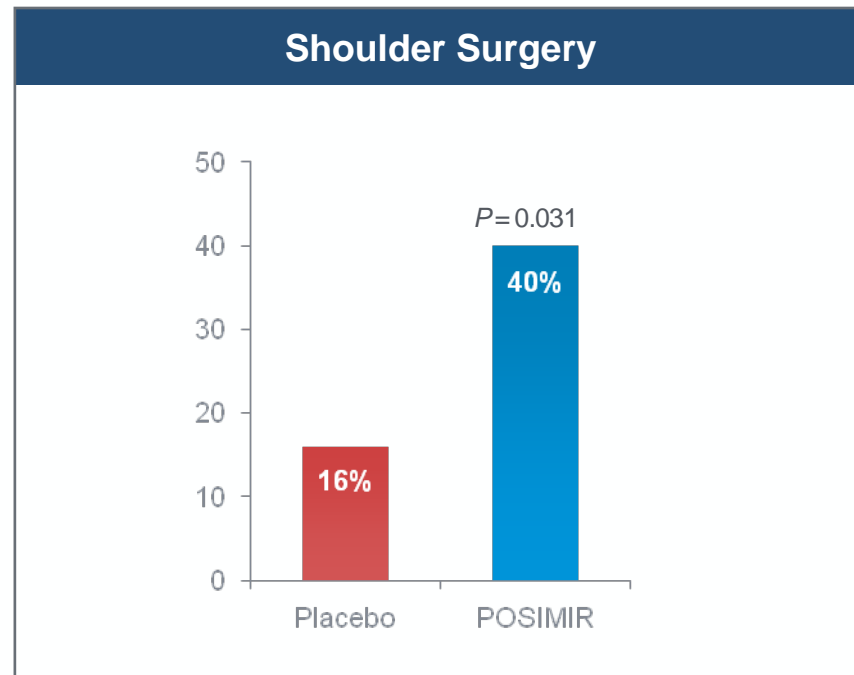
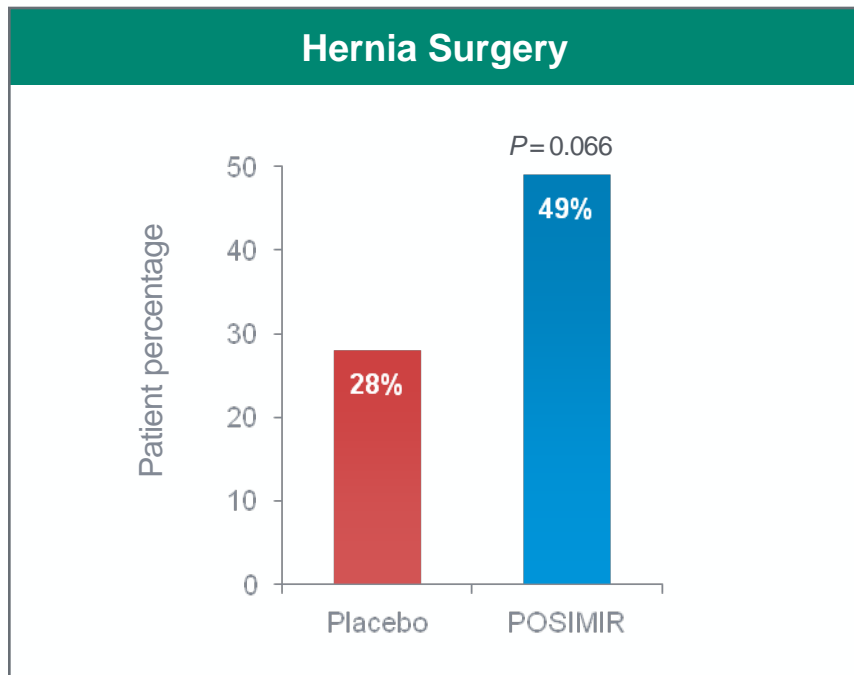
P-values derived from ANOVA.

POSIMIR®: Reduction in Opioid Use



P-values derived from nonparametric Wilcoxon Rank Sum test.

POSIMIR®: Proportion of Patients NOT Taking ANY Supplemental Opioid



% of Patients Not Taking Opioids, 0-72 hours
>20% more patients did not require a single opioid

P-values derived from CMH Chi-Square test adjusted by study sites.

POSIMIR Summary

01

Significant unmet need for new long-acting non-narcotic medications for post-operative pain

02

Robust clinical data package to support FDA filing

03

Successful hernia and shoulder pivotal trials

04

Dr. Lee Simon¹ leading the effort to submit a response to the CRL

05

Submission to FDA of a response to the CRL planned for 1H 2019;
potential FDA approval in 2H 2019

1. Principal at SDG, LLC, an FDA advisory firm . Served as the FDA's Division Director of Analgesic, Anti-inflammatory and Ophthalmologic Drug Products from 2001 to 2003.

Approved Therapeutics, Additional Programs and Cash Flow Positive Product Lines

Approved Therapeutics and Cash Flow Positive Product Lines

Product / Indication	Phase 1-2	Phase 3	NDA filed	Approved	Commercial	Highlights
PERSERIS™ (Schizophrenia)	▶					Indivior fully launched in Feb. 2019 with 50 reps. ¹
Methydur (ADHD - Taiwan)	▶					Approved in Taiwan - Orient Pharma plans 2019 launch in Taiwan ¹
Product / Use	Commercial					
ALZET® (Pumps for Animal Research)	▶					Cash flow positive product line
LACTEL® (Absorbable Polymers)	▶					Cash flow positive product line

(1) DURECT to receive earn-outs / royalties based on net sales by Indivior and Orient Pharma. For PERSERIS prescribing information, including BOXED WARNING and Medication Guide visit www.perseris.com.

DURECT Corporation

Financial Overview

Nasdaq	DRRX
Recent Price	\$0.60 ¹
Shares O/S	162.3 MM ²
Market Cap	\$98 MM ¹
Cash & Investments	\$28.8MM ³
Debt	\$20.7 MM ³
Federal NOL's	\$348 MM ³
Insider Buying	>2.5 MM shs ⁴
Options in lieu of bonus	>\$7.3 MM ⁴
Reduced salaries and board fees for options:	>\$2.2 MM ⁵



Cupertino, CA headquarters

As of May 24, 2019 ² As of May 7, 2019 ³ As of March 31, 2019 ⁴ 2012-2017 ⁵ 2011-2017

DURECT: Four Major Potential Catalysts in 2019

01

Alcoholic Hepatitis (AH): Announced positive preliminary data in DUR-928 Phase 2a Clinical trial. Completion of the trial and top line data in 2H

02

Initial data from DUR-928 Phase 1b 28-day multi-dose NASH trial

03

Top line data from DUR-928 Phase 2a, 28-day proof-of-concept trial in mild to moderate plaque psoriasis

04

Potential FDA approval of POSIMIR[®] for post-operative pain



**TRANSFORMING MEDICINE
RESTORING WELLBEING**

DURECT Corporation

A Biopharmaceutical Company