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Durect Corp (DRRX-NASDAQ)

Gilead Agreement, Near-Term Value-Inflection Opportunities Make DRRX Particularly Attractive at Current Valuation

We value DRRX using sum-of-the-parts, with most of the value related to DUR-928 based on pricing of recent NASH-targeted M&A transactions as a proxy. Our methodology also includes DCF of DRRX's current cash-generating products and earn-outs.

Current Price (08/19/19)	$1.36
Valuation	**$5.25**

OUTLOOK

Gilead licensing agreement not only brings substantial upfront capital ($25M) and potential subsequent related income ($145M or more), but also further validates the utility and diversity of the SABER platform technology. We think is particularly noteworthy given GILD's leading position in the HIV therapeutic space – a fact that will also hopefully bode well for chances of eventual development and commercial success of the products covered under this licensing arrangement.
Encouragingly, as it relates to the pipeline update, development progress of all DRRX's programs appears unimpeded, remains on-track with prior expectations and is expected to lead to several important milestones before current year-end.
As it relates to DUR-928 in AH, preliminary data showed response in the 90mg severe cohort was consistent with that of the first 10 patients, which were reported in May and which we characterized as 'highly compelling and indicative of a potentially potent efficacy signal as well as lack of toxicity'. DEC OK'd enrollment of 150mg severe cohort. Full study results, expected later this year, could be value-inflection event in our opinion.
POSIMIR CRL response submitted, FDA assigns PDUFA date of 12/27/19 – representing another potential value-inflection opportunity.

SUMMARY DATA

52-Week High	**$1.49**
52-Week Low	**$0.46**
One-Year Return (%)	**7.09**
Beta	**2.01**
Average Daily Volume (sh)	**1,261,078**
Shares Outstanding (mil)	**192**
Market Capitalization ($mil)	**$261**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**46**
Insider Ownership (%)	**4**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**12.4**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2019 Estimate	**N/A**
P/E using 2020 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Avg.,**
Type of Stock	**Small-Growth**
Industry	**Med-Drugs**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2017	4.6 A	4.3 A	20.8 A	19.5 A	49.2 A
2018	3.5 A	3.4 A	8.0 A	3.6 A	18.6 A
2019	4.1 A	4.0 A	8.8 E	6.9 E	23.7 E
2020					27.6 E

Price/Sales Ratio (Industry = 2.5x)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2017	-$0.06 A	-$0.07 A	$0.04 A	$0.05 A	-$0.03 A
2018	-$0.05 A	-$0.04 A	-$0.02 A	-$0.05 A	-$0.16 A
2019	-$0.04 A	-$0.04 A	-$0.01 E	-$0.03 E	-$0.12 E
2020					-$0.14 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

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WHAT'S NEW

Q2 Financial Results and Operational Update

Durect reported financial results for their second quarter ending June 30th and provided a pipeline development update. **Major highlights on the operational front include:**

- Gilead, HIV/HBV-SABER licensing agreement: on July 22nd DRRX announced an out-licensing agreement with Gilead Sciences (GILD) related to their SABER (controlled drug delivery) technology in the development of a long-acting injectable HIV product. GILD also receives exclusive access to SABER for HIV and HBV and the exclusive option to license additional SABER-based products for HIV and HBV. The agreement, which will pay DRRX $25M upfront and potentially up to another $145M in development and sales related milestones (in addition to tiered royalties on sales) for the initial injectable HIV product, comes after ~two years' worth of feasibility related work between the parties. Additionally, DRRX is eligible to receive another $150M per product (in upfront, development, regulatory and sales milestones) as well as sales royalties for each additional SABER-based HIV or HBV product that GILD may decide to pursue
    - Our comments: we view this as significant for DRRX not only for the substantial upfront capital and potential subsequent related income, but also as further validation of the utility and diversity of the SABER platform technology. We think is particularly noteworthy given GILD's leading position in the HIV therapeutic space – a fact that will also hopefully bode well for chances of eventual development and commercial success of the products covered under this licensing arrangement
- Capital raise: DRRX beefed up their cash balance with the June sale of 29M common shares (@ $0.52/share) which netted ~$15M. Pro forma for the $25M upfront payment from GILD, cash balance (incl ST investments) at Q2 quarter end was approximately $63.0M (up from $34.1M at March 31, 2019). Assuming cash burn continues at the recent rate of ~$2.0M per month, Q2'19 pro forma cash balance represents over 2.5 years' worth of operating funds
    - Our comments: we, however, do expect the burn rate to increase upon further development progress of DUR-928 and debt maturities, beginning in August 2020, could also affect the length of the cash runway (although there presumably would be an option to refinance the debt and/or extend their maturities). Nonetheless the cash balance provides significant breathing room and creates additional flexibility in terms of optimizing the capital structure. We also note that increasing cash needs may be at least partially offset by new or increasing contribution from POSIMIR (if FDA-approved), PERSERIS earn-outs and ORADUR sales royalties (in addition to the potential for development milestones under the new GILD SABER/HIV agreement)

Encouragingly, as it relates to the pipeline update, development progress of all DRRX's programs appears unimpeded, remains on-track with prior expectations and is expected to lead to several important milestones before current year-end.

Among the development-related highlights (see further below for more detail on each of these programs) since DRRX reported Q1'19 earnings (May 7th) were;

- DUR-928 Ph2a trial in Alcoholic Hepatitis (AH)
    - Severe cohort:
        - 90mg severe cohort (n=4) dosing completed in June
        - preliminary 90mg severe cohort results: while DRRX has not yet disclosed specifics (eg. PK, liver chemistry, biomarkers), they did note in a June 18th PR and the Q2 earnings call that **preliminary data showed that response in the 90mg severe cohort was consistent with that of the first 10 patients** (a total of eight 30mg patients: n=4 moderate, n=4 severe and a total of two 90mg patients: n=1 moderate, n=1 severe). As a reminder, we characterized results of the first 10 patients, which were reported in early May (and which did include specifics in regards to Lille scores, bilirubin levels and MELD scores, in addition to supportive commentary from KOLs including that the data "…give[s] us tremendous hope in this study drug") as 'highly compelling and indicative of a potentially potent efficacy signal as well as lack of toxicity'
        - per the June PR, "after reviewing safety and pharmacokinetic (PK) data from the completed cohorts, the Dose Escalation Committee (DEC) has approved commencement of dosing at the 150 mg level in severe AH patients"

        - 150mg severe cohort (n=4) is now enrolling. This is the final group of severe patients, following completion of which is expected to be followed by DRRX meeting with FDA to discuss details related to a pathway for U.S. regulatory approval
    - Moderate cohort
        - 90mg moderate cohort (n=4) is now enrolling (in parallel with 150mg severe cohort)

- POSIMIR
    - In late-June DRRX submitted a full response to FDA's Complete Response Letter (CRL)
    - In mid-July DRRX announced that FDA filed their full response as a 'complete class 2 resubmission' and assigned a user fee goal (i.e. PDUFA) date of December 27, 2019 (i.e. 6 months from DRRX's date of resubmission)

Upcoming milestones include;

- DUR-928
    - Ph2a trial (IV administered) in Alcoholic Hepatitis
        - 150mg severe cohort completes dosing
        - 90mg moderate cohort completes dosing
        - 2H'19
            - Ph2a trial completion and topline data
            - Data presentation at AASLD (possibly) in November
        - If all goes well, following trial completion, DRRX will meet with FDA and outline a path (potentially including an accelerated pathway) to approval. Management currently anticipates that the next step will be a Ph2b trial which could commence next year
    - Ph2a trial (topically administered) in Psoriasis (enrollment which began in March)
        - Topline data expected in 2H'19
    - Ph1b trial (orally administered) in NASH (enrollment which began in March)
        - Topline data expected in 2H'19
- POSIMIR
    - Anticipate response from FDA by 12/27/19 (i.e. PDUFA date) related to DRRX's full response to CRL. As we had removed POSIMIR from our model, a favorable response from FDA would likely provide upside to our estimates. The market for POSIMIR could be substantial and, as such, potential revisions to our model could be as well. As such, we will be eagerly awaiting word from FDA.

As it relates to DRRX's Q2 financials, total revenue of $4.0M included $2.4M in product sales, mostly related to ALZET mini pumps and LACTEL biodegradable polymer products, as well as $1.6M in collaborative revenue. Total revenue was slightly lower than our $4.2M estimate as a ~$300k beat on collaboration revenue (i.e. $1.6M A vs $1.3M E) was not enough to offset a ~$500k miss on product sales (i.e. $2.4M A vs $2.9M E).

Product sales remain a cash cow. Product margin was 63% in Q2, up about 170 and 570 basis points from the prior year and quarter, respectively. Operating expenses, at $9.9M, were about 7% lower than what we had anticipated, up about $1M from the prior year and largely flat from Q1. While we continue to model incrementally increasing opex, mostly on the R&D line, reflecting assumed clinical progression of DUR-928 (and, to a lesser extent, the other pipeline programs), the GILD upfront payment (timing of full recognition of which is currently unclear) should provide some near-term offset (although will not have a cash impact beyond the initial receipt).

We may also see a more significant contribution from PERSERIS-related earn-outs (which represent 100% margin). DRRX receives single-digit royalties on sales by Indivior. In late-February Indivior announced that they had launched PERSERIS with a 50-person sales team. While DRRX noted that PERSERIS earn-outs have been immaterial to-date (through Q2'19) and Indivior (per their Q2 call) expects revenue of the product to be "modest" through the end of 2019, they (i.e. Indivior) also indicated that the roll-out continues to build momentum, noting that physician adoption is "going well".

Methydur sustained release capsules (for ADHD) represent another potential incremental revenue and margin enhancer. Orient Pharma received Taiwan regulatory approval of the product in September 2018. Orient anticipates launching ORADUR-ADHD in that country this year and is also seeking regulatory clearance and commercialization partners in other Asian countries, including in China. As a reminder, DRRX receives a royalty on

sales of the product by Orient and retains rights to it in North America, Europe, Japan and all other countries not specifically licensed to Orient Pharma. DRRX is currently seeking development and commercialization partners in one or more of these territories

Cash
In June DRRX raised ~$15M, net, via the sale of 29M common shares at $0.52/share. Pro forma for the $25M upfront payment from GILD, cash balance (incl ST investments) at Q2 quarter end was approximately $63.0M (up from $34.1M at March 31, 2019). Operating burn was $6.0M and $11.7M ($6.5M and $13.1M ex-changes in working capital) in the three and six months ending 6/30/19.

As it relates to the operational front…

- **DUR-928** is where we continue to believe most of the upside value lies in DRRX. As a reminder, DUR-928 could have platform-like utility and is being investigated in several formulations and potential applications including oral, intravenous and topical formulas and in indications such NASH, alcoholic hepatitis (AH) and psoriasis. Recent progress on these programs include (also see our detailed description of DUR-928 programs later in this report);

    - **AH Phase 2a study with IV DUR-928**
        - Includes two patient cohorts;
            - Part A: moderate AH at three dose levels; 30mg, 90mg and 150mg (n=4 per dose cohort) and
            - Part B: severe AH at 30mg, 90mg and possibly a 150mg dose (n=4 per dose cohort)
        - Preliminary data on first 10 patients (8 30mg: 4 moderate, 4 severe and 2 90mg: 1 moderate, 1 severe) was reported on May 7th. ***Results in our opinion were highly compelling, indicating a potentially potent efficacy signal and lack of toxicity.*** Our enthusiasm is further bolstered by supportive comments from AH KOLs (which joined the call in May)
        - Results were compared to ongoing Univ of Louisville (UL) study (led by Dr McClain) as a proxy comparator arm. UL study patients' (n=15) therapy consisted of either supportive care or supportive care with corticosteroids
        - Baseline average MELD scores (i.e. AH severity) were similar among 10 DUR-928 patients and 15 UL patients
        - ***Results showed*** (data was available for 9 of initial 10 DUR-928 patients). Along with safety, which showed no issues through the first 10 patients, results included;
            - Lille scores: used in clinical practice to assess AH prognosis after 7 days of treatment. Studies have shown Lille score below 0.45 is associated with 85% 6-month survival rate and above 0.45 is associated with 25% 6-month survival rate
                - DUR-928 (n=9): median Lille score of 0.04 (range 0.01-0.19) at Day 7
                - UL (n=15): median Lille score of 0.41 (range 0.02-0.96) at Day 7
                - The differences (i.e. DUR-928 lower Lille scores vs UL) were statistically significant (p=0.002, Wilcoxon's Rank Sum)
            - Bilirubin levels: bilirubin is a determinant for liver functioning (lower is better) and is used in practice as a marker for clinical outcomes of AH patients
                - DUR-928: median bilirubin fell from baseline by 16% at Day 7 (n=9) and by 41% at Day 28 (n=8)
                - UL (n=15) median bilirubin fell from bassline by 3% at Day 7 and by 35% at Day 28
                - The change from baseline with DUR-928 was statistically significant (p=0.04) at both days (and was not statistically different with UL at either day)
            - Model of End-Stage Liver Disease (MELD) scores: used in clinical practice as an assessment of severity of AH and patient prognosis
                - DUR-928: median MELD fell from baseline by 4% at Day 7 (n=9) and fell by 21% at Day 28 (n=8)
                - UL (n=15): median MELD increased from baseline by 4% at Day 7 and fell by 6% at Day 28
                - The change from baseline differences with DUR-928 was statistically significant at Day 28 (p=0.03) and trended towards significant reduction by Day 7

- Among the comments from the KOLs on the call that lend support for these results as well as the potential market for DUR-928 in AH include;
    - Regarding unmet need for effective AH therapy (for context, given the lack of better alternatives, corticosteroids are currently used as a first-line therapy for AH)[1]
        - "There really are no therapies for this [i.e. AH]. Corticosteroids, I'm not convinced they work at all actually."
        - "There was a recent randomized controlled trial that really did not show statistically significant benefit with [corticosteroids] product. And it's been out for 40 years, and we rarely use it at all at Northwestern."
        - "And liver transplant, which is the other way you can save people who are on liver failure, these patients are in general contraindicated from liver transplant."
    - Regarding these preliminary results (relative to safety and efficacy)[2]
        - [These results are from] "[s]mall number of patients but give us tremendous hope in this study drug."
        - "And the beautiful thing about it so far is the safety. We went from the 30-milligram dose to the 90, and we have -- we haven't seen any significant signals of any safety issues."
        - "And so far, every patient we've put in my group that had a response to the treatment. And the main response we see bilirubin improving. Once bilirubin is improving, everything starts to change. The MELD score changes. The MELD rate changes. Whatever scoring system you use, bilirubin is a key element in this disease, and we have been seeing improvement in the bilirubin within the first few days."
        - "Actually, this is my first time to see the collected data together. So I'm very enthusiastic."

- Severe 90mg (n=4) cohort results announced June 2019: while DRRX has not yet disclosed specifics (eg. PK, liver chemistry, biomarkers), they did note in a June 18th PR and the Q2 earnings call that preliminary data showed **that response in the 90mg severe cohort was consistent with that of the first 10 patients** (a total of eight 30mg patients: n=4 moderate, n=4 severe and a total of two 90mg patients: n=1 moderate, n=1 severe)
    - Per the 6/18 PR, after reviewing the safety and PK data from the completed cohorts, the DEC approved commencement of the 150mg level in severe patients
    - 150mg severe cohort (n=4) is now enrolling. This is the final group of severe patients, following completion of which is expected to be followed by DRRX meeting with FDA to discuss details related to a pathway for U.S. regulatory approval
    - 90mg moderate cohort (n=4) is also enrolling (in parallel to 150mg severe)

- Next steps
    - Complete dosing of 150mg severe cohort
    - Complete dosing of 90mg moderate cohort
    - 2H'19
        - Ph2a trial completion and topline data
        - Data presentation at AASLD (possibly) in November
    - We also note that if the full study data further supports the safety and effectiveness of DUR-928 and largely confirms the findings from the initial 12 patients, we think that could represent a value inflection event for the share price
    - If all goes well, following trial completion, DRRX will meet with FDA and outline a path to approval. Management currently anticipates that the next step will be a Ph2b trial which could commence next year
    - The severity of AH, high mortality rate and lack of effective therapies for the disease could bold well for FDA fast-track designation of a pivotal program

- **NASH Phase 1b program**

[1] Professor of Medicine and Surgery with the Division of Hepatology at Northwestern University, a Feinberg School Of Medicine. He also serves as the Chief of Transplant Hepatology. Dr. Flamm has published and speaks widely in the field of hepatic diseases.
[2] Dr Tarek Hassanein. Professor of Medicine at University of California San Diego School of Medicine. Dr. Hassanein was instrumental in establishing three major liver transplant programs. http://www.livercenters.com/about-sclc/meet-our-staff/

- Ph1b open label, multi-site, U.S. study to evaluate safety, pharmacokinetics and signals of biological activity of orally-administered DUR-928 over 28 consecutive days in NASH patients with stage 1 – 3 fibrosis
- Three doses; low (50mg QD), middle (150mg QD) and high (300mg QD). Each cohort n= 20 patients (60 patients total)
- Key endpoints: safety and pharmacokinetics (PK), clinical chemistry and biomarkers (e.g., bilirubin, lipids, liver enzymes, CK-18s, and inflammatory cytokines) as well as liver imaging (with MRI-PDFF) for fat. Note that, aside from liver imaging, all of these endpoints are similar to those used in DRRX's initial Ph1b NASH study (conducted in Australia) which showed that a single dose of DUR-928 was associated reductions in all of these biomarkers and did so with no safety issues
- Patient dosing commenced in late-March 2019 (i.e. inline with expectations)
- ***Initial data from this study expected in 2H'19***

o **Psoriasis with topical DUR-928**

- Phase2a proof-of-concept study with topical DUR-928 in patients with mild-to-moderate plaque psoriasis
  - U.S., multi-site, randomized, double-blind (patients serve as own control)
  - Primary endpoint is change in local psoriasis scores from baseline versus control
  - Targeting enrollment of 20 in order to obtain data on at least 15 patients
  - DUR-928 applied topically once-daily for four weeks with four-week follow-up
- Dosing commenced in March 2019 (inline with expectations)
- ***Topline data expected in 2H'19***

- **U.S. launch of PERSERIS**. On July 30, 2018 Indivior announced that FDA approved their NDA for PERSERIS (risperidone), the first once-monthly subcutaneous risperidone-containing, long-acting injectable for the treatment of schizophrenia in adults. ***On February 27, 2019, Indivior announced the U.S. launch of PERSERIS.*** DRRX will receive single-digit royalties on sales by Indivior***.***

- **Regulatory approval of Methydur sustained release capsules (for ADHD) in Taiwan**. Orient Pharma received notice of regulatory approval in Taiwan in September 2018. Per DRRX's recent filings, Orient Pharma has stated that they expect to make Methydur commercially available in Taiwan in 2019. DRRX receives a royalty on sales of the product by Orient and retains rights to it in North America, Europe, Japan and all other countries not specifically licensed to Orient Pharma. DRRX is currently seeking development and commercialization partners in one or more of these territories.

- **POSIMIR CRL response made in June, assigned PDUFA date of 12/27/19**. POSIMIR is the company's investigational post-operative pain relief depot that utilizes the company's patented SABER technology and is intended to deliver bupivacaine to provide three days of pain relief after surgery.

  On June 27th Durect announced that they submitted a full response to FDA's Complete Response Letter for POSIMIR, which Durect received in February 2014. Then, on July 17th the company announced FDA filed their full response as a 'complete class 2 resubmission' and assigned a user fee goal (i.e. PDUFA) date of December 27, 2019 (i.e. 6 months from DRRX's date of resubmission).

  As a reminder DRRX submitted an NDA ((via 505(b)(2) pathway)) to FDA for POSIMIR in April 2013. FDA responded in February 2014 with a Complete Response Letter. Following interaction with the agency, Durect conducted and completed a Phase 3 clinical trial of POSIMIR (PERSIST trial). As reported in October 2017, while results favored POSIMIR, the trial failed to meet its primary endpoint of a statistically significant reduction in pain on movement over the first 48 hours after surgery as compared to standard bupivacaine HCI. To-date Durect has completed a total of 16 clinical studies with POSIMIR.

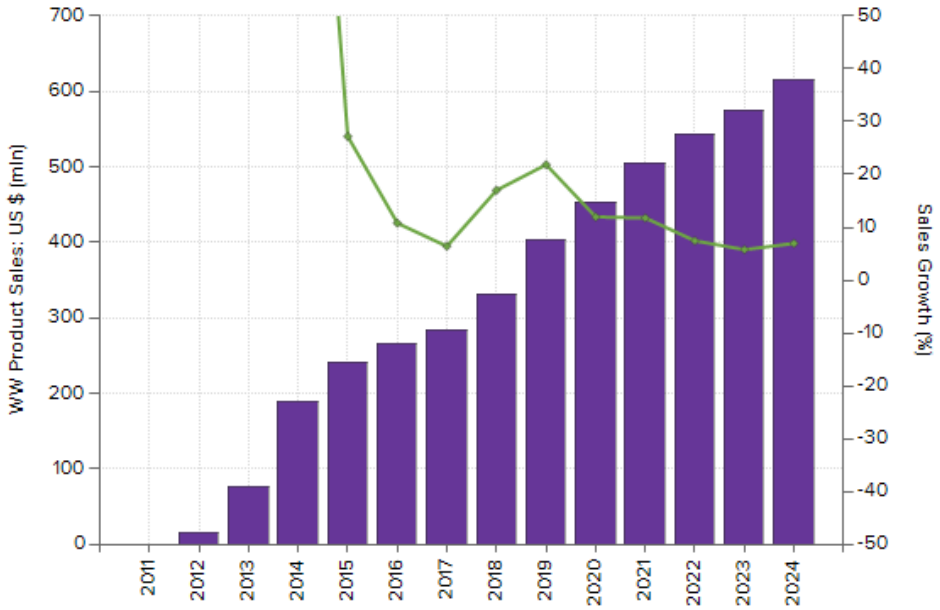
  DRRX recently engaged Dr. Lee S. Simon, a physician and previous (2001 – 2003) Director of FDA's Analgesic, Anti-inflammatory and Ophthalmologic Drug Products division, to evaluate potential next-steps with POSIMIR. The decision to submit a response to the CRL was based on Dr. Simon's review of the PERSIST data – which presumably means that he believes the package that they compiled and submitted was sufficient (based on his insight and experience with FDA's Analgesic division, particularly in terms of what they need as support) to warrant eventual approval of the POSIMIR NDA. Per Dr. Simon's comment in DRRX's June 27th

PR, "We believe that the submitted response to the CRL includes multiple positive adequate and well controlled trials and addresses the issues raised in the FDA's Complete Response Letter."

Importantly, it is our understanding that approval largely hinges on demonstration of sufficient safety and that failure to meet the efficacy endpoint in PERSIST may not be particularly relevant. Further, DRRX's CRL response includes substantive additional data that supports safety of the drug. With a PDUFA date of 12/27/19, we should hear back from FDA before current year-end.

As we had removed POSIMIR from our model, a favorable response from FDA would likely provide upside to our estimates. The market for POSIMIR could be substantial and, as such, potential revisions to our model could be as well. As such, we will be eagerly awaiting word from FDA.

Historical and Consensus Analysts' Estimated Sales of Exparel



Source: EvaluatePharma

Similar to POSIMIR, bupivacaine is the active ingredient in Pacira Biosciences' Exparel, which is also indicated for postsurgical pain relief. Exparel (bupivacaine liposome injectable suspension) generated $331M in sales in 2018 (effectively all of which was from the U.S.) which analysts forecast will grow at a CAGR of almost 11% to $615M by the year 2024. Exparel accounts for 100% of the revenue of Pacira Biosciences' (NASDAQ: PCRX), which currently trades at a market capitalization of ~$1.6 billion.

Pipeline Refresher

DUR-928 Programs:

Update on Phase 2a Injectable DUR-928 for AH

In late-April 2018, Durect commenced patient dosing in a **Phase 2a** clinical trial of DUR-928 in patients with **alcoholic hepatitis (AH).**

AH is an acute form of alcoholic liver disease and is associated with long-term heavy alcohol use. Approximately 10% - 35% of heavy drinkers are believed to suffer from AH at some point in their life and about 320k hospitalizations occur as a result of the disease. With an average AH-related hospitalization costing ~$50k and the disease associated with tens of thousands of deaths each year in the U.S., the condition is expensive to treat and often deadly. In fact, short-term mortality of severe AH is estimated to be as 50***%. There are no approved treatments for AH.*** While corticosteroids are considered first-line treatment, there is no significant evidence that they are effective in treating the disease. The only known 'treatment' for AH is liver transplantation, the cost of which is prohibitive and which most AH sufferers do not qualify for (given that 6-month sobriety is a prerequisite for qualification).

This is an open label, dose escalation study conducted in two parts.

- **Part A** includes patients with moderate alcoholic hepatitis (MELD = 11 to 20), and
- **Part B** will include patients with severe alcoholic hepatitis (MELD = 21 to 30)

The study is being conducted using **three dose levels** (30, 90 and 150 mg) in Part A, with sequential dose escalation following review of safety and PK results of the prior dose level. Patients receive DUR-928 by intravenous infusion, and the dose may be adjusted in Part B based on the findings from Part A. Patients will be enrolled at multiple clinical sites in the U.S. and the target number of participants to complete the study is **24-36**. The objectives of this study include safety, PK and PD signals, as determined by improvement in liver biochemistry, model for end stage liver disease (MELD) scores and Lille scores, and other biomarkers.

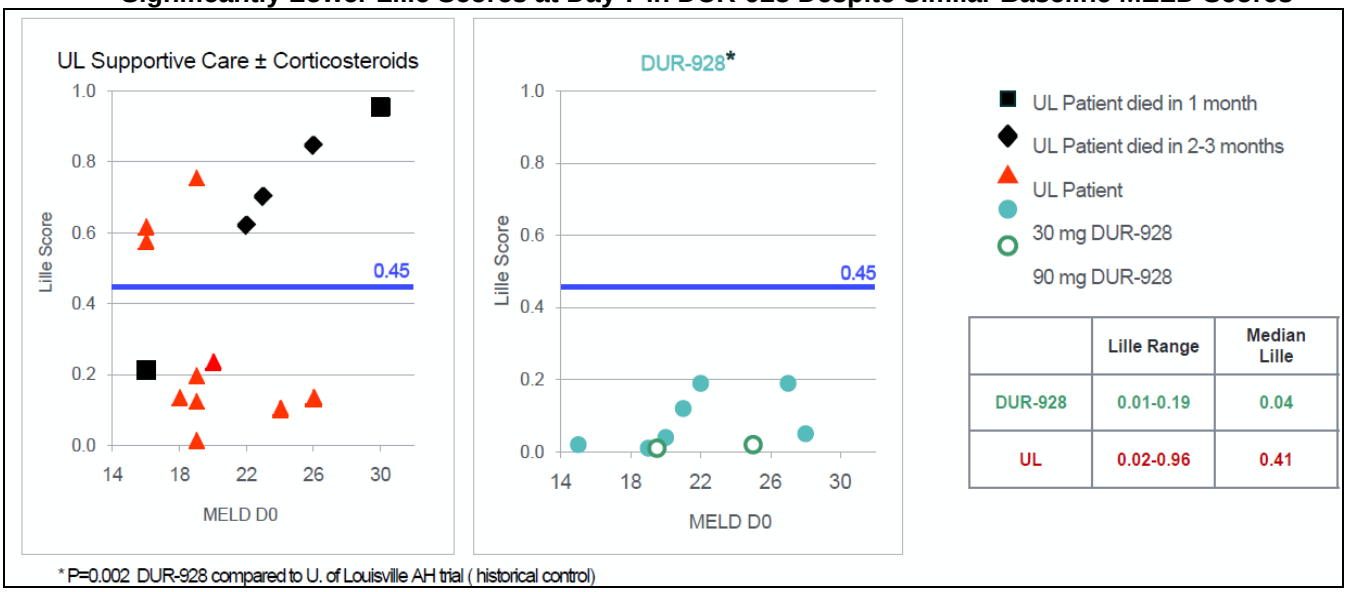
The study protocol was recently updated with the goal of speeding trial completion. Protocol now allows for Part B (i.e. severe AH) to commence enrollment (initially with low-dose) following review by trial oversight committee, while simultaneously continuing to enroll Part A.

Preliminary results (of initial 10 patients); highly compelling, suggest potent efficacy, no toxicity…
Preliminary data, on the first 10 patients, was reported on May 7th. These 10 patients included eight from the 30mg cohort (4 moderate AH and 4 severe AH) and two from the 90mg dose (1 moderate and 1 severe). Results in our opinion are highly compelling, indicating a potentially potent efficacy signal and lack of toxicity. Our enthusiasm is further bolstered by supportive comments from key opinion leaders in AH (which joined the call).

Along with safety, which showed no issues through the first ten patients, results were reported on Lille scores, bilirubin levels and MELD scores and were compared to results of an ongoing trial at the University of Louisville led by Dr. Craig McClain. These UL results, which included 15 AH patients treated with either supportive care (n=8) or supportive care with corticosteroids (n=7), were used as a proxy comparator arm.

- Lille scores: used in clinical practice to assess AH prognosis after 7 days of treatment. Studies have shown Lille score below 0.45 is associated with 85% 6-month survival rate and above 0.45 is associated with 25% 6-month survival rate
  - DUR-928 (n=9): median Lille score of 0.04 (range 0.01-0.19) at Day 7
  - UL (n=15): median Lille score of 0.41 (range 0.02-0.96) at Day 7
  - The differences (i.e. DUR-928 lower Lille scores vs UL) were statistically significant (p=0.002, Wilcoxon's Rank Sum)
  - The graphic below shows that baseline MELD scores (i.e. AH severity) were approximately similar between the DUR-928 and UL patients yet Lille scores are significantly lower among DUR-928 patients as compared to UL patients

Significantly Lower Lille Scores at Day 7 in DUR-928 Despite Similar Baseline MELD Scores



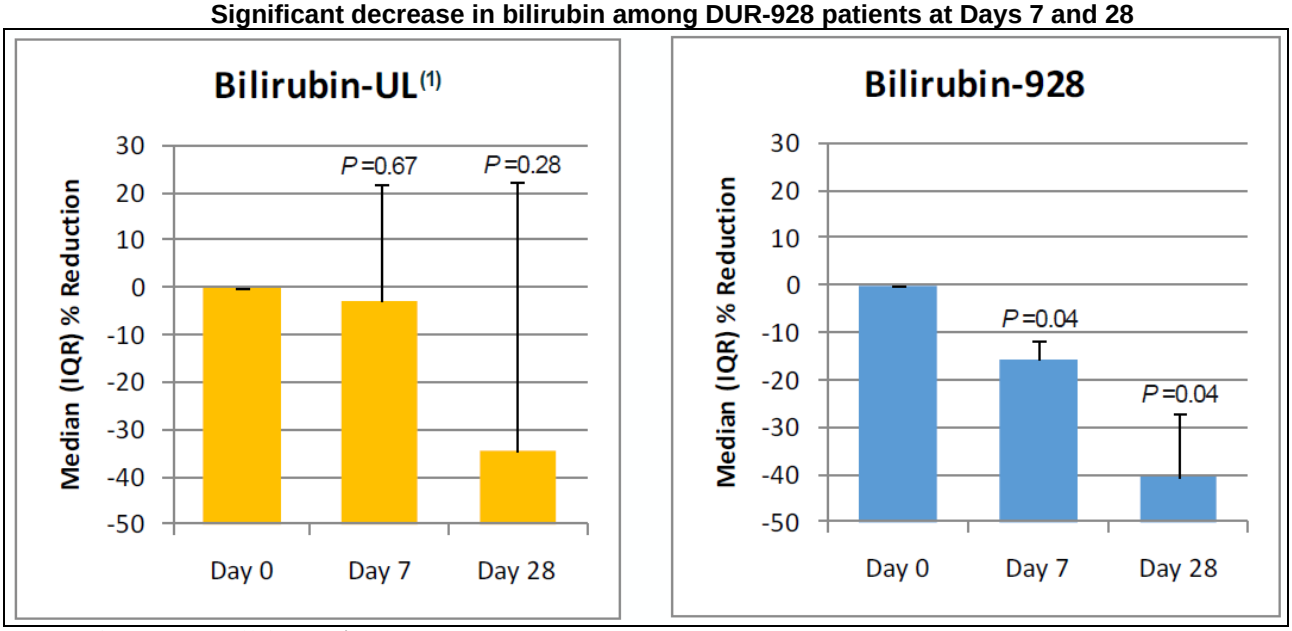
	Lille Range	Median Lille
DUR-928	0.01-0.19	0.04
UL	0.02-0.96	0.41

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

Source: Durect May 2019 presentation

- Bilirubin levels: bilirubin is a determinant for liver functioning (lower is better) and is used in practice as a marker for clinical outcomes of AH patients
  - DUR-928: median bilirubin fell from baseline by 16% at Day 7 (n=9) and by 41% at Day 28 (n=8)
  - UL (n=15) median bilirubin fell from bassline by 3% at Day 7 and by 35% at Day 28
  - The change from baseline with DUR-928 was statistically significant (p=0.04) at both days (and was not statistically different with UL at either day)

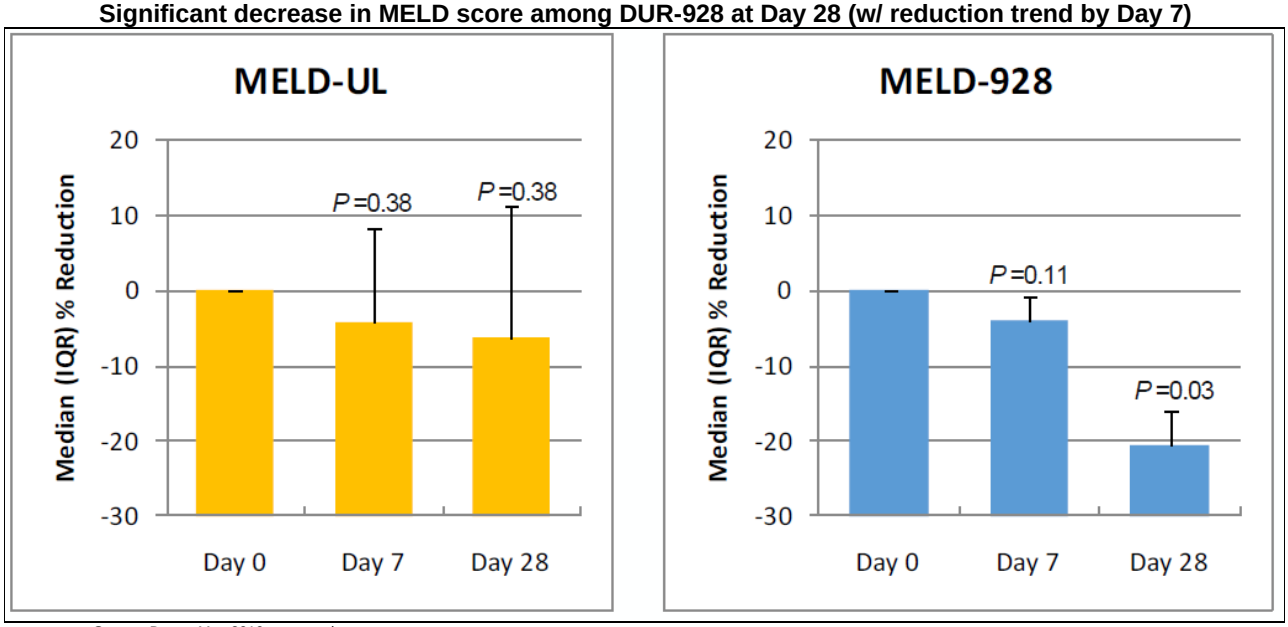
Significant decrease in bilirubin among DUR-928 patients at Days 7 and 28



Source: Durect May 2019 presentation

- Model of End-Stage Liver Disease (MELD) scores: used in clinical practice as an assessment of severity of AH and patient prognosis
  - DUR-928: median MELD fell from baseline by 4% at Day 7 (n=9) and fell by 21% at Day 28 (n=8)
  - UL (n=15): median MELD increased from baseline by 4% at Day 7 and fell by 6% at Day 28
  - The change from baseline differences with DUR-928 was statistically significant at Day 28 (p=0.03) and trended towards significant reduction by Day 7

Significant decrease in MELD score among DUR-928 at Day 28 (w/ reduction trend by Day 7)



Source: Durect May 2019 presentation

90mg Cohort Completes, DEC OKs 150mg Dosing of Severe AH Patients
On June 18th DRRX announced that the 90mg cohort with severe alcoholic hepatitis patients completed dosing and the Dose Escalation Committee approved enrollment of the 150mg severe AH cohort in their ongoing AH Phase 2a study with IV DUR-928. Importantly, not only do results appear to continue to be as hoped, but DRRX continues to hit their anticipated timelines with this study.

While DRRX has not yet disclosed specifics (eg. PK, liver chemistry, biomarkers), they did note in their June 18th PR and the Q2 earnings call that preliminary data showed that response in the 90mg severe cohort was consistent with that of the first 10 patients (a total of eight 30mg patients: n=4 moderate, n=4 severe and a total of two 90mg patients: n=1 moderate, n=1 severe). As a reminder, we characterized results of the first 10 patients, which were reported in early May (and which did include specifics in regards to Lille scores, bilirubin levels and MELD scores, in addition to supportive commentary from KOLs including that the data "…give[s] us tremendous hope in this study drug") as 'highly compelling and indicative of a potentially potent efficacy signal as well as lack of toxicity'.

Following a review of the safety and PK data from the completed cohorts, the DEC approved commencement of dosing at the 150mg level in severe AH patients (n=4). Moderate AH patients at 90mg have also begun enrolling. This is the final group of severe patients, following completion of which is expected to be followed by DRRX meeting with FDA to discuss details related to a pathway for U.S. regulatory approval.

Next steps of Phase 2a trial of injectable DUR-928 for AH…

- Complete dosing of 150mg severe cohort
- Complete dosing of 90mg moderate cohort
- 2H'19
    - Ph2a trial completion and topline data
    - Data presentation at AASLD (possibly) in November
- We also note that if the full study data further supports the safety and effectiveness of DUR-928 and largely confirms the findings from the initial 12 patients, we think that could represent a value inflection event for the share price
- If all goes well, following trial completion, DRRX will meet with FDA and outline a path to approval. Management currently anticipates that the next step will be a Ph2b trial which could commence next year
- The severity of AH, high mortality rate and lack of effective therapies for the disease could bold well for FDA fast-track designation of a pivotal program

Update on DUR-928 for NASH
In January 2016, Durect initiated a single-ascending-dose **Phase 1b** clinical trial with oral DUR-928 in patients with nonalcoholic steatohepatitis **(NASH)** in **Australia.**

This Phase 1b trial of DUR-928 was a dose ranging (50 mg and 200 mg), single-ascending-dose safety and pharmacokinetic (PK) study of **oral DUR-928** in subjects with NASH and matched control subjects (MCS). This study was conducted in successive cohorts evaluating single-dose levels (first a low dose and then a high dose) of oral DUR-928. Both cohorts consisted of 10 NASH patients and 6 MCS.

Table 1. Patient Demographics (mean ±SD)

	Cohort 1 (50 mg)		Cohort 2 (200 mg)	
Demographics	NASH	MCS	NASH	MCS
# of Patients	10	6	10	6
Age (yrs)	53.4 (10.7)	56.8 (6.5)	53.2 (12.9)	54.7 (6.0)
BMI (kg/m2)	34.7 (6.2)	31.2 (2.4)	36.6 (6.4)	33.2 (4.4)
Gender (M/F)	5/5	5/1	5/5	3/3
Baseline ALT (U/L)	66.7 (18.9)	19.3 (6.5)	78.9 (45.5)	20.8 (4.8)
Cirrhotic Patients	2	--	3	--
Non-Cirrhotic Patients	6	--	5	--
Undetermined	2	--	2	--

In April 2017 Durect presented the updated **Phase 1b** data at the International Liver Congress (EASL) in Amsterdam. In both cohorts, DUR-928 was **well tolerated overall**. There was an approximate 10-30% increase in

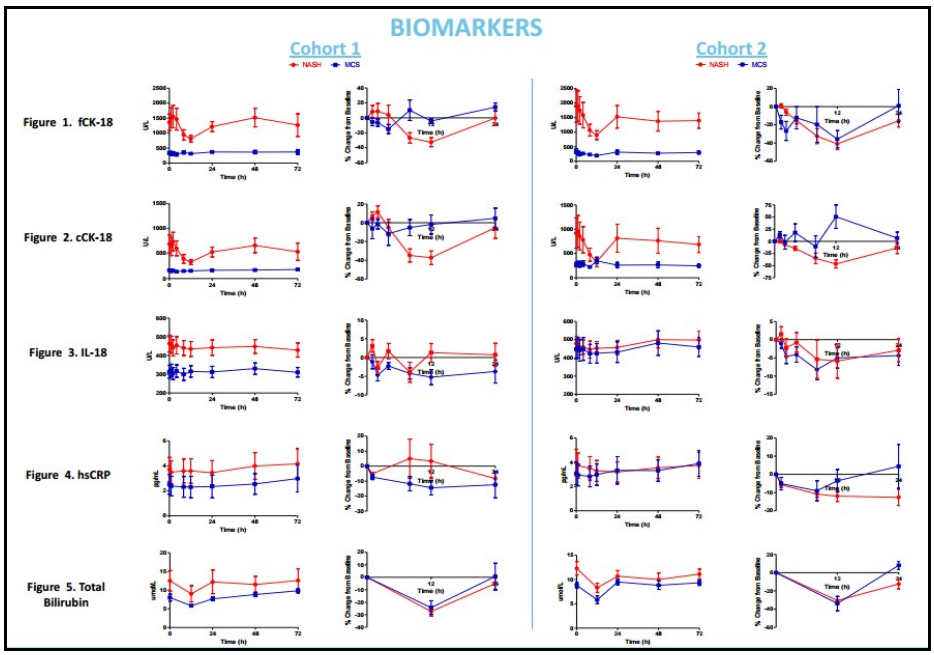
DUR-928 exposure in NASH patients compared to MCS. A single serious adverse event (shortness of breath), designated as possibly related to study drug, was reported in cohort 2 in a NASH patient with a prior history of arrhythmia and an ongoing viral infection; no unusual abnormal biochemistry was observed and the symptom spontaneously resolved.

Table 2. Pharmacokinetic Parameters (mean ±SEM)

	Cohort 1		Cohort 2	
PK Parameters	**NASH**	**MCS**	**NASH**	**MCS**
Cmax (ng/mL)	113.2 (36.3)	94.0 (27.4)	332.7 (99.5)	260.5 (54.8)
Tmax (hr)	2.4 (0.8)	3.0 (1.1)	2.9 (1.2)	2.7 (1.0)
T½ (hr)	1.6 (0.2)	1.7 (0.3)	1.9 (0.4)	1.7 (0.4)
AUClast (ng*hr/mL)	512.7 (219.1)	476.5 (187.6)	1723.7 (470.9)	1316.9 (203.4)
AUCinf (ng*hr/mL)	528.1 (216.4)	487.9 (190.2)	1732.6 (470.5)	1325.5 (202.9)

Exploratory biomarker analysis indicated that a single oral dose of DUR-928 resulted in reductions from baseline in the levels of both full-length and cleaved cytokeratin-18 (CK-18), bilirubin, hsCRP and IL-18 in NASH patients.

- The decrease of full-length CK-18 (a generalized cell death marker) at 12 hours was approximately 33% in the NASH patients in the low dose cohort and approximately 41% in the high dose cohort. The decrease of cleaved CK-18 (a cell apoptosis marker) at 12 hours was approximately 37% in the NASH patients in the low dose cohort and approximately 47% in the high dose cohort.
- The decrease in total bilirubin (a liver function marker for which a decrease would be seen as positive) at 12 hours in the NASH patients was approximately 27% in the low dose cohort and approximately 31% in the high dose cohort.
- High sensitivity C-Reactive Protein (hsCRP), a marker of inflammation, trended higher at 12 hours in the NASH patients by approximately 3% in the low dose cohort but trended lower by approximately 12% in the high dose cohort.
- IL-18, an inflammatory mediator implicated in both liver and kidney diseases, trended lower at 12 hours by approximately 5% in both the low dose cohort and in the high dose cohort.



New (U.S.) NASH Phase 1b program

Dosing of a new Ph1b U.S. study of oral DUR-928 in NASH commenced in late-March 2019. This is a Ph1b open label, multi-site, U.S. study to evaluate safety, pharmacokinetics and 'signals of biological activity' of orally-administered DUR-928 over 28 consecutive days in NASH patients with stage 1 – 3 fibrosis. It will include three doses of DUR-928; low (50mg QD), middle (150mg QD) and high (300mg QD) with each cohort consisting of 20 patients (60 patients total).

Key endpoints: safety and PK, clinical chemistry and biomarkers (e.g., bilirubin, lipids, liver enzymes, CK-18s, and inflammatory cytokines) as well as liver imaging (with MRI-PDFF) for fat. Note that, aside from liver imaging, all of these endpoints are similar to those used in DRRX's initial Ph1b NASH study (conducted in Australia) which showed that a single dose of DUR-928 was associated reductions in all of these biomarkers and did so with no safety issues.

This 28-day study will provide a longer-duration look at both safety and biomarker effects and, depending on the results, could offer a lot more insight into later-stage study design and, potentially, even represent a valuation inflection for the share price (in our opinion). As such, we will be eagerly awaiting **initial results, expected in the second half of this year.**

DUR-928 Topical Formulation for Psoriasis

Psoriasis effects between 7M and 32M Americans. Traditional first-line prescription therapy includes steroids to address inflammation and redness. DRRX is investigating topical DUR-928 for plaque psoriasis. Durect **completed** an initial **exploratory Phase 1b** trial in **psoriasis** patients (n = 9 evaluable patients) in Australia. The decision to proceed with clinical testing in psoriasis was based on the anti-inflammatory and cell survival properties of DUR-928, including the downregulation of IL-17, full length CK-18, cleaved CK-18, as well as the results of a psoriasis study with DUR-928 in mice.

The **Phase 1b** trial was conducted with intradermal micro injections of DUR-928, and the company thinks the results warrant further investigation. As a result, the company has developed several topical formulations of DUR-928 that the company is evaluating for a topical application microplaque trial. There is a large unmet medical need for new topical drugs for psoriasis for use prior to systemic biologic treatments which often have significant associated side effects.

Dosing of their Phase2a proof-of-concept study with topical DUR-928 in patients with mild-to-moderate plaque psoriasis commenced in March of this year (inline with expectations). This will be a U.S.-based multi-site, randomized, double-blind, controlled study with targeted enrollment of ~20 anticipated, which is expected to yield ~15 evaluable patients.

Topical application will occur 1x daily for four weeks. Each patient will serve as their own control arm with DUR-928 and vehicle-control applied to separate plaques on each patient throughout the four-week duration of the study. Follow-up will occur during weeks five through eight (i.e. four weeks subsequent to treatment duration). Primary efficacy endpoint will be improvement in local psoriasis scores in the DUR-928-treated plaque compared to the vehicle-treated plaque. **Topline data is expected in 2H 2019.**

Update on Phase 1b Injectable DUR-928 for Kidney Disease

This trial was also conducted in **Australia**. This **Phase Ib** trial of DUR-928 was an open-label single-ascending-dose safety and pharmacokinetic study in patients **with impaired kidney function** (stage 3 and 4 chronic kidney disease) and matched control subjects. It was conducted in successive cohorts (first a low dose and then a high dose) evaluating single-dose levels of DUR-928 administered **by injection.**

The low dose cohort enrolled 6 kidney function impaired patients and 3 matched control subjects, and the high dose cohort enrolled 5 kidney function impaired patients and 3 matched control subjects. Results showed DUR-928 was well tolerated among all subjects and the PK parameters between the kidney function impaired patients and the matched control subjects were comparable.

Gilead, HIV/HBV-SABER licensing agreement, includes $25M upfront + up to $145M on backend…

On July 22nd DRRX announced an out-licensing agreement with Gilead Sciences (GILD) related to their SABER (controlled drug delivery) technology in the development of a long-acting injectable HIV product. GILD also receives exclusive access to SABER for HIV and HBV and the exclusive option to license additional SABER-based products for HIV and HBV. The agreement, which will pay DRRX $25M upfront and potentially up to another $145M in development and sales related milestones (in addition to tiered royalties on sales) for the initial injectable HIV product, comes after ~two years' worth of feasibility related work between the parties. Additionally, DRRX is eligible to receive another $150M per product (in upfront, development, regulatory and sales milestones) as well as sales royalties for each additional SABER-based HIV or HBV product that GILD may decide to pursue.

We view this as significant for DRRX not only for the substantial upfront capital and potential subsequent related income, but also as further validation of the utility and diversity of the SABER platform technology. We think is

particularly noteworthy given GILD's leading position in the HIV therapeutic space – a fact that will also hopefully bode well for chances of eventual development and commercial success of the products covered under this licensing arrangement.

PERSERIS (long-acting injectable risperidone)
In October 2017, Durect reached a $17.5 million patent purchase agreement with **Indivior UK Limited**, an affiliate of Indivior PLC (INDV.L). The deal assigned certain of Durect U.S. patent rights to Indivior for RBP-7000, Indivior's recently FDA-approved **once-monthly injectable risperidone product** for the treatment of schizophrenia. Per the agreement, Indivior made an upfront payment to Durect of $12.5 million. Then, in late-July 2018, Indivior announced that FDA approved their NDA for PERSERIS, which triggered a $5M milestone payment to DRRX (received in Q3'18). DRRX will also receive quarterly earn-out payments based on a single-digit percentage of U.S. net sales of PERSERIS (as well as other products covered by the patent rights). On February 27, 2019, Indivior announced the U.S. launch of PERSERIS.

Risperidone (branded and unbranded) remains one of the most widely used anti-psychotics. PERSERIS addresses low compliance rates among individuals prescribed oral risperidone (taken daily), which has been shown to be a significant risk factor related to inadequate treatment of schizophrenia. As PERSERIS is the only long-acting risperidone-containing injectable, it represents the only available option that directly addresses lack of dosing adherence – which is particularly problematic among individuals with psychosis given their cognitive handicaps.[3] This long-acting benefit could draw significant interest upon launch and drive early adoption, particularly for those patients that struggle with adherence to oral risperidone therapy.

Indivior noted on their Q4'18 call in February 2019 that they will be detailing the product with a sales force of approximately 50 reps. While DRRX noted that PERSERIS earn-outs have been immaterial to-date (through Q2'19) and Indivior (per their Q2'19 call) expects revenue of the product to be "modest" through the end of 2019, they (i.e. Indivior) also indicated that the roll-out continues to build momentum, noting that physician adoption is "going well".

According to prescription data aggregated by Evaluate Pharma, U.S. and WW sales of risperidone in 2017 were approximately $380M and $1.0B, respectively. While forecasts suggest U.S. market contraction into 2019, the introduction of PERSERIS is expected to push total U.S. risperidone sales back to positive growth beginning in 2020. Indivior is guiding for peak annual sales of PERSERIS of $200M - $300M.

POSIMIR (bupivacaine extended release solution)
POSIMIR is the company's investigational post-operative pain relief depot that utilizes the company's patented SABER technology and is intended to deliver bupivacaine to provide three days of pain relief after surgery.

On June 27th Durect announced that they submitted a full response to FDA's Complete Response Letter for POSIMIR, which Durect received in February 2014. Then, on July 17th the company announced FDA filed their full response as a 'complete class 2 resubmission' and assigned a user fee goal (i.e. PDUFA) date of December 27, 2019 (i.e. 6 months from DRRX's date of resubmission).

As a reminder DRRX submitted an NDA ((via 505(b)(2) pathway)) to FDA for POSIMIR in April 2013. FDA responded in February 2014 with a Complete Response Letter. Following interaction with the agency, Durect conducted and completed a Phase 3 clinical trial of POSIMIR (PERSIST trial). As reported in October 2017, while results favored POSIMIR, the trial failed to meet its primary endpoint of a statistically significant reduction in pain on movement over the first 48 hours after surgery as compared to standard bupivacaine HCI. To-date Durect has completed a total of 16 clinical studies with POSIMIR.

DRRX recently engaged Dr. Lee S. Simon, a physician and previous (2001 – 2003) Director of FDA's Analgesic, Anti-inflammatory and Ophthalmologic Drug Products division, to evaluate potential next-steps with POSIMIR. The decision to submit a response to the CRL was based on Dr. Simon's review of the PERSIST data – which presumably means that he believes the package that they compiled and submitted was sufficient (based on his insight and experience with FDA's Analgesic division, particularly in terms of what they need as support) to warrant

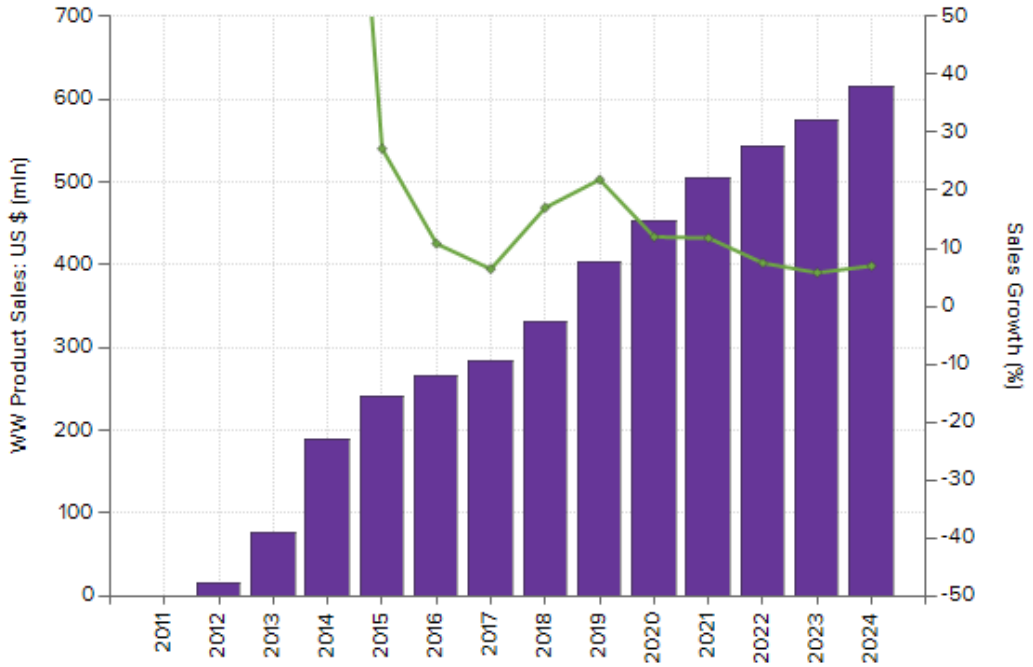
[3] Nielsen J., et al. Comparative Effectiveness of Risperidone Long-Acting Injectable vs FirstGeneration Antipsychotic Long-Acting Injectables in Schizophrenia: Results From a Nationwide, Retrospective Inception Cohort Study. Schizophrenia Bulletin vol. 41 no. 3 pp. 627–636, 2015

eventual approval of the POSIMIR NDA. Per Dr. Simon's comment in DRRX's June 27th PR, "We believe that the submitted response to the CRL includes multiple positive adequate and well controlled trials and addresses the issues raised in the FDA's Complete Response Letter."

Importantly, it is our understanding that approval largely hinges on demonstration of sufficient safety and that failure to meet the efficacy endpoint in PERSIST may not be particularly relevant. Further, DRRX's CRL response includes substantive additional data that supports safety of the drug. With a PDUFA date of 12/27/19, we should hear back from FDA before current year-end.

As we had removed POSIMIR from our model, a favorable response from FDA would likely provide upside to our estimates. The market for POSIMIR could be substantial and, as such, potential revisions to our model could be as well. As such, we will be eagerly awaiting word from FDA.

Historical and Consensus Analysts' Estimated Sales of Exparel



Source: EvaluatePharma

Similar to POSIMIR, bupivacaine is the active ingredient in Pacira Biosciences' Exparel, which is also indicated for postsurgical pain relief. Exparel (bupivacaine liposome injectable suspension) generated $331M in sales in 2018 (effectively all of which was from the U.S.) which analysts forecast will grow at a CAGR of almost 11% to $615M by the year 2024. Exparel accounts for 100% of the revenue of Pacira Biosciences' (NASDAQ: PCRX), which currently trades at a market capitalization of ~$1.6 billion.

REMOXY

On August 6, 2018, Durect's partner Pain Therapeutics reported that it received a Complete Response Letter (CRL) from the FDA relative to their NDA REMOXY ER (oxycodone), extended-release capsules. The CRL concluded that, "The data submitted in [the] NDA do not support the conclusion that the benefits of [REMOXY] Extended-Release Capsules outweigh the risks." Following the CRL, Pain Therapeutics further announced a strategic reorganization to align its resources on advancing its drug and diagnostic assets in Alzheimer's disease.

Following news of receipt of the CRL we removed REMOXY from our model as we noted that we believed it was more likely than not that the development program would either be completely discontinued or at least significantly delayed.

On November 12, 2018 Pain Therapeutics announced a meeting on January 31st with FDA to discuss their appeal of the latest CRL. The PR also laid out their case supporting the appeal, noting that they believe there were calculation errors, "material mistakes and misrepresentations made by FDA during a June 2018 Advisory Committee" and that when corrected for these, "REMOXY has properties that may deter against common methods

of abuse, such as injection abuse". The PR goes on, making the case for REMOXY as less abusable than ER oxycodone, associated with lower health risks and meeting all evidentiary standards for FDA approval.

On February 5, 2019 Pain Therapeutics announced feedback from its meeting with FDA which notes that, "we walked out of this meeting feeling a bit disoriented by FDA's lack of transparency, clarity or helpfulness" and provides an implicit conclusion that, "we believe we are no closer today to product approval than we were over a year ago." Then on March 20, 2019 Durect received notice from Pain Therapeutics (name of which since changed to Cassava Sciences) that, effective June 18, 2019, they were terminating their agreement with the company. As a result, exclusive worldwide rights to REMOXY ER reverts to DRRX.

VALUATION

Large Market Opportunity for DUR-928

Although DUR-928 may have broad applications in many indications, we believe most of the underlying value resides in NAFLD/NASH, AH and acute kidney injury.

Non-alcoholic fatty liver disease (NAFLD) is the build-up of extra fat in liver cells that is not caused by alcohol. It is normal for the liver to contain some fat. However, if more than 5% - 10% percent of the liver's weight is fat, then it is called a fatty liver (steatosis). The more severe form of NAFLD is called non-alcoholic steatohepatitis (NASH). NASH causes the liver to swell and become damaged.

NAFLD affects about 30% of adults and 10% of children in the US, among which 10-30% will develop NASH. 25-40% NASH patients will develop progressive liver fibrosis, while 20-30% NASH patients with advanced fibrosis will develop cirrhosis, which could lead to liver cancer. Currently there are no FDA approved medicines for the treatment of NAFLD/NASH.

Acute kidney injury (AKI) is defined as an abrupt or rapid decline in renal filtration function. This condition is usually marked by a rise in serum creatinine concentration or by azotemia (a rise in blood urea nitrogen [BUN] concentration).

Per Medscape, in the United States, approximately 1% of patients admitted to hospitals have AKI at the time of admission. The estimated incidence rate of AKI during hospitalization is 2-5%. AKI develops within 30 days postoperatively in approximately 1% of general surgery cases and arises in up to 67% of intensive care unit (ICU) patients. Approximately 95% of consultations with nephrologists are related to AKI. The appropriate nephrologist referral rate is approximately 70 cases per million populations.

The current treatment for AKI is mainly supportive in nature. No therapeutic modalities to date have shown efficacy in treating the condition. Therapeutic agents (eg, dopamine, nesiritide, fenoldopam, mannitol) are not indicated in the management of AKI and may be harmful for the patient.

Certainly, there are highly unmet medical needs in the NAFLD/NASH and acute kidney injury fields. The unique mechanism of action and the compelling animal and human data so far make DUR-928 a highly promising candidate for the management of NAFLD/NASH and kidney injury.

We value DRRX using sum-of-the-parts, with most of the value related to DUR-928 based on pricing of recent NASH-targeted M&A transactions as a proxy. Our methodology also includes discounted cash flow of DRRX's current cash-generating products and earn-outs.

DUR-928 valued at between $750M and $1B

Examples of some of the higher-profile NASH-related acquisitions include Allergan's (AGN) September 2016 purchase of Tobira Therapeutics. The deal, valued at $1.7B (inclusive of potential development and commercial milestones), brought two NASH candidates; Cenicriviroc, an oral CCR2/5 inhibitor in phase 2 and Evogliptin, an oral DPP-4 inhibitor in phase 1.

Earlier in 2018 Gilead bought Nimbus Therapeutics for $400M upfront and $800M in potential development milestones. NDI-0107976, an ACC inhibitor in phase 1 for the treatment of NASH was the main attraction for

Gilead. Other recent NASH-related acquisitions are in the table below which was constructed by Evercore ISI. Preclinical and phase 1 candidates have commanded as much as $450M and $1B+, respectively, in buyouts.

We think frothiness of the NASH space coupled with the potential versatility of DUR-928 as it relates to formulations (oral, IV and topical) as well as its applicability in various conditions, including NASH, acute liver disease, PCS and even psoriasis warrants potential premium pricing. Initial human proof-of-concept in phase 1 studies for various formulations demonstrating a strong safety and drug interaction profile, in addition to compelling efficacy signals, further supports the relative value of DUR-928. Based on recent M&A transactions, DUR-928 has a relative value of between $750k and $1B. Further positive clinical trial progression would likely move valuation closer to the $1B mark.

Activity in the NASH space is high, with a number of recent acquisitions and partnerships.

Acquirer/Partner	Target	Type of Deal	Date Announced	Names of Programs	Phase of Development (at acquisition)	Total Value of Acquisition	Additional Details
Novartis	Conatus	Collaboration; NVS acquired worldwide rights to emricasan	December 2016	Emricasan	Phase 2b	Total potential value of at least $700 million	Conatus also eligible for tiered double digit royalties and option to co-commercialize
Allergan	Tobira	Acquisition	September 2016	Cenicriviroc (CVC), Evogliptin	CVC: Phase 3, Evogliptin: Phase 1	Total potential value of $1.695 billion	Upfront payment of $28.35 per share, in cash, and up to $49.84 per share in Contingent Value Rights
Allergan	Akarna	Acquisition	September 2016	AKN-083	Preclinical	>$50 million	$50 million upfront, with other milestones
Gilead	Nimbus	Acquisition	April 2016	NDI-010976 and other preclinical assets	Phase 1	Total potential value of $1.2 billion	Upfront payment of $400 million, with potential to receive $800 million in addition
Boehringer Ingelheim	Pharmaxis	Acquisition of PXS4728A program	May 2015	PXS4728A	Phase 1	Total potential value of ~$250 million for NASH	$31 million upfront, $222 million in milestone payments; in addition, royalties on sales
Merck	NGM Biopharma	Collaboration; MRK acquired 15% stake in the company	February 2015	Multiple including NP201	Preclinical	Total potential value of $450 million	$94 million upfront, 15% equity stake, up to $250 million to fund collaboration
Gilead	Phenex	Acquired NASH programs	January 2015	Multiple including Px-104	Phase 2	Total potential value of $470 million	Undisclosed upfront sum and milestones

Source: Company Press Releases

EVERCORE ISI

Current cash-generating products and earn-outs worth ~$90M

We estimate cash flow of DRRX's legacy products (Actel and Lactel) and PERSERIS earn-outs of approximately $85M over the next seven years. Discounting back to present at 12%, results in NPV of approximately $60M. We assign a 50% premium to the NPV value to reflect the likelihood of additional licensing, collaboration and earn-out opportunities materializing over the same period. We also note that this NPV value ($60M x 1.5 = $90M) may be conservative as it does not consider any assumed contribution from POSIMIR, only minimal contribution from ORADUR and no contribution from any potential products under the GILD relationship. Our sum-of-the-parts also adds in the $25M cash milestone from GILD.

Our sum-of-the-parts methodology values DRRX at approximately $990M, or $5.25/share

PROJECTED INCOME STATEMENT

Durect Corporation

DURECT Corp	Q1	Q2	Q3	Q4	2018 A	Q1	Q2	Q3	Q4	2019 E	2020 E	2021 E
PERSERIS Earn-outs (US)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$2.2	$2.4
YOY Growth	-	-	-	-	-	-	-	-	-	-	5845.9%	9.1%
PERSERIS (Ex-US)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	
ORADUR-ADHD (DRRX rights)	$0	$0	$0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	
ORADUR-ADHD (Orient Pharma) Rylty	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.1	$0.4	$0.7
YOY Growth	-	-	-	-	-	-	-	-	-	-	566.7%	75.0%
DUR-928	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-
Alzet Pumps & Lactel Polymers	$2.4	$2.8	$2.3	$2.9	$10.4	$2.6	$2.3	$2.6	$3.1	$10.6	$12.0	$12.4
YOY Growth	-42.1%	-9.3%	-11.3%	-12.6%	-20.9%	10.0%	-15.2%	8.7%	8.7%	2.6%	12.9%	3.3%
Total Product Sales	$2.4	$2.8	$2.3	$2.9	$10.4	$2.6	$2.3	$2.6	$3.1	$10.6	$12.0	$12.4
YOY Growth	-42.1%	-9.3%	-11.3%	-12.6%	-20.9%	10.0%	-15.2%	8.7%	8.7%	2.6%	12.9%	3.3%
Collaborative Revenue	$1.1	$0.6	$5.7	$0.8	$8.2	$1.5	$1.6	$6.2	$3.8	$13.1	$15.6	$16.3
YOY Growth	152.5%	-49.1%	1.6%	-95.2%	-65.2%	36.9%	154.1%	9.5%	383.9%	59.9%	18.9%	4.5%
Revenue from sale of IP rights	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Revenues	$3.5	$3.4	$8.0	$3.6	$18.6	$4.1	$4.0	$8.8	$6.9	$23.7	$27.6	$28.7
YOY Growth	-23.6%	-21.0%	-61.3%	-81.4%	-62.2%	18.4%	16.8%	9.3%	88.9%	27.9%	16.2%	4.0%
Cost of Goods Sold	$1.2	$1.1	$0.9	$1.1	$4.3	$1.1	$0.9	$0.9	$1.2	$4.1	$4.3	$4.3
Product Gross Margin	50.9%	60.8%	61.1%	61.7%	58.8%	56.8%	62.5%	63.6%	61.4%	65.0%	64.1%	65.0%
SG&A	$3.2	$2.8	$2.9	$3.5	$12.4	$3.5	$3.3	$3.3	$3.6	$13.6	$16.1	$18.7
% SG&A	91.6%	82.5%	35.7%	97.6%	66.9%	83.6%	82.3%	37.6%	52.6%	57.4%	58.3%	65.2%
R&D	$7.0	$6.1	$6.5	$5.9	$25.5	$6.3	$6.6	$6.8	$7.1	$26.7	$35.1	$37.9
% R&D	199.3%	179.3%	81.4%	162.3%	137.4%	151.3%	165.6%	77.4%	103.6%	112.6%	127.2%	132.1%
Operating Income	($7.8)	($6.6)	($2.3)	($6.9)	($23.6)	($6.7)	($6.8)	($2.2)	($5.0)	($20.8)	($27.9)	($32.2)
Operating Margin	-	-	-	-	-	-	-	-	-	-	-	-
Interest & Other Net	($0.5)	($0.4)	($0.4)	($0.4)	($1.7)	($0.4)	($0.5)	($0.2)	($0.2)	($1.3)	($0.2)	($1.6)
Pre-Tax Income	($8.3)	($7.0)	($2.7)	($7.3)	($25.3)	($7.1)	($7.2)	($2.5)	($5.3)	($22.1)	($28.1)	($33.8)
Taxes	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income	($8.3)	($7.0)	($2.7)	($7.3)	($25.3)	($7.1)	($7.2)	($2.5)	($5.3)	($22.1)	($28.1)	($33.8)
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-
Reported EPS	($0.05)	($0.04)	($0.02)	($0.05)	($0.16)	($0.04)	($0.04)	($0.01)	($0.03)	($0.12)	($0.14)	($0.17)
YOY Growth					-	-	-	-	-	-	-	
Shares Outstanding	153.6	161.6	162.0	162.0	159.8	162.1	164.4	192.0	192.2	177.7	196.0	205.0

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