



Hope for patients, promise for families.

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NASDAQ: OCRX

As-of June 1, 2017
~26 M shares outstanding
Market Cap: ~\$29MM

www.ocerainc.com

Overview

Ocera Therapeutics, Inc.
(NASDAQ: OCRX)

Lead program OCR-002 (ornithine phenylacetate) is a novel and validated systemic ammonia scavenger in clinical development for the treatment and prevention of hepatic encephalopathy (HE), a neurocognitive disorder associated with serious liver disease.

OCR-002 (ornithine phenylacetate)

Differentiated product in late stage development for unmet need for acute, rapid treatment of hyperammonemia

- IV for acute use to treat overt HE
 - Phase 2b STOP-HE complete; meeting planned with FDA Q3 2017
- Oral for step-down and chronic continuity of care
 - Phase 2a dose-finding study initiated Jun 2017; data expected by year-end 2017
- Only direct ammonia scavenger in development for HE
- \$2B blockbuster potential US market opportunity
 - Upside potential ex-US
 - Pre-clinical evidence shows potential benefit of OCR-002 in other indications such as NASH/NAFLD, portal hypertension and muscle wasting

About Hepatic Encephalopathy

Hepatic Encephalopathy (HE) is a debilitating and progressive complication of liver cirrhosis, or liver failure, marked by mental changes including confusion, impaired motor skills, disorientation, and in its more severe form, stupor, coma and even death. HE is driven by elevated ammonia, a natural byproduct of protein digestion, when the liver is unable to detoxify the ammonia via the urea cycle. Once thought reversible, increasing evidence shows neurocognitive impairment persists even after an overt HE episode is resolved and the longer a patient is in HE, the more residual impairment the patient will have¹. Further, a recent study² showed patients remaining in HE longer than 48hrs have a worse survival rate at one, three, and twelve months, compared to patients whose HE resolved within 48hrs, independent of the severity of liver disease, $p < 0.0001$. High hospital readmission rates of 20-35% due to HE in the first 2-3 months have been observed.³

Our Mission

Developing novel therapeutics for orphan and other serious liver diseases with high unmet need.

Key Findings from STOP-HE in Hospitalized Patients with HE

- Ammonia correlates with HE severity (p=0.032) and ammonia reduction correlates with clinical improvement (p=0.0006)
- OCR-002 normalizes (p=0.028) and reduces ammonia levels faster than placebo
- OCR-002 lowers ammonia faster and leads to faster clinical improvement compared to placebo in patients with confirmed hyperammonemia at baseline (p=0.034)
- Patients on OCR-002 had a higher response rate at 48hrs vs placebo (p=0.026) and responders at 48hrs left hospital ~1.5 days earlier
- OCR-002 was safe and well-tolerated
- Other clinical benefits of OCR-002 observed suggest applications beyond HE

The Pipeline

| Product | Formulation | Indication | Preclinical | Phase 1 | Phase 2 | Phase 3 |
|---------|-------------|--------------------------------|-------------|---------|---------|---------|
| OCR-002 | IV | Overt Hepatic Encephalopathy* | → | | | |
| | Oral | Chronic Hepatic Encephalopathy | → | | | |
| | IV | NAFLD/NASH | → | | | |

*FDA Orphan and Fast Track Status

The OCR-002 Opportunity

- Only direct ammonia scavenger in development for HE
- Broad patent protection: Composition of Matter to 2030 (not including Hatch-Waxman extension)
- Worldwide rights

Rapid Ammonia Reduction → Faster Improvement in HE → Shorter Hospitalizations → Better Neurocognitive Outcomes and Improved Survival; Benefits Patients, Families, Clinicians and Payers

¹ Bajaj, et al "Persistence of Cognitive Impairment After Resolution of Overt Hepatic Encephalopathy" Gastroenterology 2010 Jun 138(7):2332-40

² Ventura-Cots, et al "Duration of the acute hepatic encephalopathy episode determines survival in cirrhotic patients" Poster FRI-212 EASL 2017

³ Hepatology 2016; Vol 64 No.1 Bajaj / Am Jour of Gastroenterology; Vol 107/2012 Volk / Clin Gastro and Hep 2016; 14:1181-1188 Tapper / Gastroenterology 2014;146(5 Suppl 1):S-986 Masdeh

This fact sheet contains forward-looking statements which reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. Although we believe that our plans, intentions, expectations, strategies and prospects as reflected in or suggested by those forward-looking statements are reasonable, we can give no assurance that the plans, intentions, expectations or strategies will be attained or achieved. Furthermore, actual results may differ materially from what is expressed in the forward-looking statements and will be affected by a variety of risks and factors that are beyond our control, including those risks and uncertainties discussed under "Risk Factors" in our Annual Report on form 10-K for the year ended December 31, 2016 as well as other risks detailed in our subsequent filings with the SEC. All information in this summary is as of the date of this document, and we undertake no duty to update this information unless required by law.

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