Company Presentation

Developing medicines to treat addictions and drug overdose

NASDAQ: OPNT
November 2022
Forward-Looking Statements

This presentation contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed, implied or inferred by these forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “would,” “expects,” “plans,” “intends,” “anticipates,” “believes,” “estimates,” “predicts,” “projects,” “potential,” or “continue” or the negative of such terms and other comparable terminology. These forward-looking statements are only predictions based on our current expectations and projections about future events. You should not place undue reliance on these forward-looking statements. Actual events or results may differ materially. In evaluating these forward-looking statements, you should specifically consider various factors. These and other factors may cause our actual results to differ materially from any forward-looking statement. We undertake no obligation to update any of the forward-looking statements after the date of this presentation to conform those statements to reflect the occurrence of unanticipated events, except as required by applicable law.
Summary

Fast Track Designation for OPNT003, nasal nalmefene, a new opioid overdose reversal agent, well suited for the fentanyl crisis; NDA submission using 505(b)(2) pathway planned 2022

Pipeline with additional programs for Alcohol Use Disorder and Acute Cannabinoid Overdose

Financial support and collaboration of U.S. government agencies reflects strong backing for our mission and commitment to science

$35.4 million in cash and cash equivalents (September 30, 2022).

• On November 14, Opiant announced its has entered into a definitive agreement to be acquired by Indivior plc.
• Pending Opiant shareholder approval and certain customary regulatory approvals, completion of this transaction is expected in the first quarter of 2023.
Comprehensive pipeline addressing key areas of addiction and drug overdose

<table>
<thead>
<tr>
<th>Indication</th>
<th>Product Candidate / Regulatory Pathway</th>
<th>Pre-clinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Commercial</th>
<th>Next milestone(s)</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opioid Overdose</strong></td>
<td>OPNT003* Nalmefene Nasal Spray / 505(b)(2)</td>
<td></td>
<td></td>
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<td>• NDA Submission (H2’22)</td>
<td>NIH</td>
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<tr>
<td></td>
<td>OPNT002 Naltrexone Nasal Spray / 505(b)(2)</td>
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<td></td>
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<td></td>
<td>• Phase 2 Study Data (Mid ‘23)</td>
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<tr>
<td><strong>Alcohol Use Disorder</strong></td>
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</tr>
<tr>
<td><strong>Acute Cannabinoid Overdose</strong></td>
<td>OPNT004** Drinabant (CB-1 Antagonist)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Pre-IND Meeting (2022)</td>
<td></td>
</tr>
</tbody>
</table>

*OPNT003 has financial support from the National Institute on Drug Abuse ("NIDA") and the Biomedical Advanced Research and Development Authority ("BARDA")

**Cooperative research and development agreement with the National Center for Advancing Translational Sciences ("NCATS") to formulate OPNT004 for human studies in Acute Cannabinoid Overdose
Management team with extensive experience in healthcare drug development and commercialization

Roger Crystal, MD, MRCS, MBA
CEO

Phil Skolnick, PhD, DSc (hon)
CSO

Matthew Ruth
Chief Commercial Officer

Mark Ellison, PhD
Chief Development Officer

David O'Toole, CPA
CFO

Brian Gorman, JD
EVP Corporate Development and General Counsel
OPNT003, nasal nalmefene
Opioid overdose
Record 81,000 Americans died of an opioid overdose in 2021, CDC reports, with synthetic opioids like fentanyl behind nearly 90% of the fatalities

- It is the highest number since records began and up 15% from the previous year
- Synthetic opioids including fentanyl were the most likely cause of death from an overdose
- Fatalities from synthetic opioids were up 23% - or approximately 71,000 deaths in 2021

Ahmad FB, Rossen LM, Sutton P. Provisional drug overdose death counts. National Center for Health Statistics. 2021. Opioids including fentanyl (black line) were behind almost three in five fatalities from a drug overdose, CDC figures showed. The black opioids line includes deaths from synthetic opioids (brown) natural and semi-synthetic opioids (green), heroin (blue), and methadone (purple).
Synthetic opioids such as fentanyl have properties that result in much greater risks of an overdose

The ‘triple threat’ of synthetic opioids

- Fast: Synthetic opioids like fentanyl are more lipophilic than heroin and penetrate the brain more rapidly.
- Potent: 50x more potent than heroin which leads to respiratory depression at far lower doses.
- Long-lasting: Fentanyl has a plasma half-life of 7-8 h, compared to plasma half life of naloxone of 1-2 h, leaving patients at risk of ‘renarcotization’.

Very rapid entry into the CNS effectively compresses the window of opportunity for successful intervention in an overdose.
Overdoses from synthetic opioids are challenging current treatment, leading to calls for more effective therapeutics to save more lives and reduce disability.

- Naloxone has a shorter half-life than all but the most short-acting opioids\(^1,2\)
- Multiple, sequential doses of naloxone are proving necessary to “out-compete” synthetic opioids\(^3,4\)
- NIH leadership has called for stronger, longer-acting antagonists\(^5\)

"Most of the crews are having to use two, three, four Narcan [naloxone] per patient just to get them breathing again.”

Lt. EMS Chief Robert Allison, Birmingham Fire and Rescue, Alabama (ABC news report\(^6\))

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4. Distributed via the CDC Health Alert Network, December 17, 2020, 8:00 AM ET, CDC\#00438
Opiant is developing OPNT003, nasal nalmefene, aiming to establish a new standard for opioid overdose reversal

**Key highlights**

- Developed for rapid absorption by incorporating Intravail® into its formulation and using a proven nasal spray device
- Differentiated by five-fold higher affinity at mu opioid receptors
- Best-in-class profile based on positive Pharmacokinetic (“PK”) and Pharmacodynamic (“PD”) clinical data
- Data indicates fast, strong and long-lasting treatment of opioid overdose
- Significant commercial potential as opioid overdose increases driven by potent synthetic opioids

**OPNT003, nasal nalmefene**

High-affinity mu-opioid receptor antagonist that reduces the binding of opioids to this receptor, limiting respiratory depression, the primary cause of overdose injury and death.
Existing data from nalmefene and OPNT003 Pharmacokinetic data confirms its potential to improve and sustain reversal of opioid overdose

Review of nalmefene and Opian PK data compared with naloxone and NARCAN® Nasal Spray data contained in its approved prescribing information

<table>
<thead>
<tr>
<th></th>
<th>OPNT003 (3mg)</th>
<th>Naloxone (4mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affinity at μ opioid receptors</td>
<td>1.0(^1)</td>
<td>5.4(^1)</td>
</tr>
<tr>
<td>Plasma concentrations at 5 minutes (ng/ml)</td>
<td>4.43(^3)</td>
<td>1.5(^2)</td>
</tr>
<tr>
<td>T(_{\text{max}}) (minutes)</td>
<td>15(^3)</td>
<td>30(^4)</td>
</tr>
<tr>
<td>C(_{\text{max}}) (ng/ml)</td>
<td>10(^3)</td>
<td>4.83(^4)</td>
</tr>
<tr>
<td>Half-life / T(_{1/2}) (hours)</td>
<td>11(^3)</td>
<td>2.08(^4)</td>
</tr>
</tbody>
</table>

1. K values were estimated using \(^3\)Hnalvimapan binding to cloned human μ opioid receptors (Cassel, et al., 2005). The ~5-fold higher affinity of nalmefene compared to naloxone is consistent with both K values obtained (0.13 and 0.62 nM, respectively) using \(^3\)HDAMGO as a radioligand in monkey brain membranes (Emmerson, et al., 1994) and pA\(_2\) values of 9.38 and 8.51, respectively, in functional assays using guinea pig ileum and mouse vas deferens (Toll, et al., 1998).

2. Krieter, et al., 2016

3. Data on file: NCT04759768

4. Data from FDA, 2015 (https://www.accessdata.fda.gov/drugsatfda_docs/label/2015/208411lbl.pdf)
OPNT003 compared to NARCAN® Nasal Spray in Pharmacodynamic Study

OPNT003 produced a greater reversal in remifentanil-induced respiratory depression nearly twice that of NARCAN® (Naloxone HCl) Nasal Spray 4mg at the primary endpoint of 5 minutes.

**Primary endpoint:** Reversal of remifentanil induced respiratory depression at 5 minutes

<table>
<thead>
<tr>
<th></th>
<th>Naloxone</th>
<th>Nalmefene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ MV (L/min)</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

**Secondary endpoint:** Reversal of remifentanil induced respiratory depression over 20 minutes

At 5 minutes after administration, nasal nalmefene achieved a reversal of remifentanil-induced respiratory depression to values that were within the 95% confidence interval (CI) of the minute ventilation observed just prior to remifentanil infusion. This reversal was maintained through 20 minutes. NARCAN® Nasal Spray achieved a similar reversal of minute ventilation only at 20 minutes.
Positive pharmacokinetic, safety, and tolerability results from a multi-dose study for OPNT003

Study confirms nasal administration results in rapid delivery of high plasma concentrations of nalmefene; second dose, if needed, can be delivered to either nostril.

<table>
<thead>
<tr>
<th>C&lt;sub&gt;max&lt;/sub&gt; (ng/ml)&lt;sup&gt;1&lt;/sup&gt;</th>
<th>T&lt;sub&gt;max&lt;/sub&gt; (minutes)</th>
<th>t&lt;sub&gt;1/2&lt;/sub&gt; (h)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data from study OPNT 003-PK002&lt;sup&gt;2&lt;/sup&gt;</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single dose (3 mg)</td>
<td>10.8 (45)</td>
<td>15</td>
<td>11.5</td>
</tr>
<tr>
<td>One dose each nostril (6 mg)</td>
<td>22.2 (61)</td>
<td>15</td>
<td>11.3</td>
</tr>
<tr>
<td>Two doses same nostril (6 mg)</td>
<td>18.9 (59)</td>
<td>15</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Data from study OPNT 003-PK001&lt;sup&gt;3&lt;/sup&gt;</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single dose (OPNT003-PK001)</td>
<td>12.2 (55)</td>
<td>15</td>
<td>11.3</td>
</tr>
</tbody>
</table>

1. C<sub>max</sub> values are the arithmetic mean with % coefficient of variation in parentheses. T<sub>max</sub> are median values.
2. Data on file
3. Data on file
The clinical study program will form the clinical basis of the NDA submission

**OPNT003-OOD-001**

50* healthy subjects
OPNT003, compared with NARCAN® (Naloxone HCl) Nasal Spray 4mg in reversing respiratory depression induced by synthetic opioid remifentanil

- OPNT003 met the primary endpoint of non-inferiority, which was designed to assess whether nasal nalmefene performed as well or better than NARCAN® Nasal Spray
- Nasal nalmefene produced a mean increase in minute ventilation at five minutes that was almost double that produced by NARCAN® Nasal Spray

**OPNT003-PK-001**

68 healthy subjects
OPNT003, compared with intramuscular nalmefene injection, 1 mg

- Rapid absorption ($T_{\text{max}}$ 15 min)
- High plasma concentrations ($C_{\text{max}}$ 12.2 ng/ml) that surpassed intramuscular nalmefene
- Long plasma half-life ($t_{1/2}$ ~ 11 h)

**OPNT003-PK-002**

23 healthy subjects
OPNT003 given as a single 3mg dose in one nostril, as a single dose in each nostril, and as two doses in one nostril.

- Rapid absorption ($T_{\text{max}}$ 15 min) in all three study arms
- Dose proportional plasma concentrations to single dose whether administered as a single dose in each nostril or as two doses in a single nostril
- Confirmed long plasma half-life ($t_{1/2}$ ~ 11 h)
- Safe and well tolerated

*Evaluated for primary end point
Opportunity for wider moat for potential best-in-class opioid overdose reversal agent, differentiated from current rescue agents

Molecule and technology

Nasal nalmefene is a differentiated molecule with proprietary formulation using Intravail®

Key differentiating factors

Exclusivity anticipated related to PD clinical investigation

Filed patent applications for OPNT003

The U.S. Patent and Trademark Office has issued a Notice of Allowance for U.S. patent with claims covering OPNT003 for opioid overdose

Exclusive license to use Intravail®
The main addressable market for OPNT003 is public interest with additional potential retail customers - and both sectors are well funded

Target markets

**Public Interest Sector**
- Law enforcement (local and federal)
- Fire Departments
- Community
- Emergency medical services (EMS)

**Retail Sector**
- Pharmacists - Standing Orders in all states
- Physicians - Driven by co-prescribing legislation now present in 13 states

Funded by

**SAMSHA**
- State Opioid Response and Block Grants
- Significant added government support

**Chicago Tribune**

Payors
- NARCAN® Nasal Spray minimal co-pay for almost all payors

1. Based on Adapt Pharma revenue (2016) and Emergent Biosolutions NARCAN® Nasal Spray expected net sales in 2021
Opiant is building its own commercial infrastructure with key hires and pre-launch activities already underway

<table>
<thead>
<tr>
<th>Commercial organization</th>
<th>Strategic imperatives</th>
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<tbody>
<tr>
<td>Scalable organization, leveraging talent, best practices and innovative solutions</td>
<td>Ensure current laws and funding for opioid overdose reversal agents include nasal nalmefene</td>
</tr>
<tr>
<td></td>
<td>Secure widespread distribution that ensures broad access</td>
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<tr>
<td></td>
<td>Establish comprehensive, affordable coverage</td>
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<tr>
<td></td>
<td>Partner with key stakeholders in education, awareness and funding that ideally result in more distribution and access to opioid reversal agents</td>
</tr>
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</table>

Establish OPNT003 as the opioid overdose reversal agent standard of care
We are targeting completion of our NDA submission under Fast-Track designation; aiming to launch 2023

Key development activities funded by NIDA and BARDA

- Pilot Pharmacokinetic ("PK") study
- Double dose PK study
- PK study
- Non-Clinical Data
- PD Study
- Completed NDA Submission
- 2023

Fast-Track Designation awarded in November by FDA

Rolling NDA submission initiated in May

Gated ramp-up of commercial activities

Note: timeline events based on Company’s expectations as of March 2022
OPNT002, nasal naltrexone
Alcohol Use Disorder (AUD)
Despite alcohol abuse rates increasing, existing medication is poorly tolerated and requires specialist prescribing – need for better alternative for treating AUD

Alcohol Use Disorder: The Role of Medication in Recovery

“very few individuals receive treatment, with an even smaller portion receiving medications approved by the U.S.FDA for the treatment of AUD, despite scientifically rigorous evidence showing the benefits of combining medication approved for treating AUD with evidence-based behavioral therapy.”

Our goal is to address the challenges of current AUD medicines

We are developing OPNT002, nasal naltrexone, to quickly reduce the pleasurable effects of drinking; patients won’t go into withdrawal or require prior detox

OPNT002 blocks the effects of endorphins released by alcohol

Nasal spray delivers rapid onset of action

Suitable for use ‘as needed’ when a patient anticipates drinking or is craving alcohol

FDA considers no heavy drinking days an endpoint

Reducing drinking from very high to moderate levels can reduce long-term mortality and overall disease burden
OPNT002 demonstrates rapid absorption in Phase 1 study, making it well suited for on-demand administration

Summary of Phase 1 PK data

Rapid nasal absorption of OPNT002 vs oral naltrexone, ensures that the maximum amount of drug is present when heavy drinking starts

- Cmax ~50% higher with OPNT002; Tmax of ~12 minutes and short half life
- Blocks mu and delta-opioid receptors, which both contribute to the desire to drink

Naltrexone Blood Levels: Oral vs Nasal vs Nasal with Intravail®

Opiant has initiated a Phase 2 trial, studying effect of OPNT002 in reducing drinking in patients with Alcohol Use Disorder

**Phase 2 Study details**

- Randomized 300-participant double-blind, placebo-controlled
- Determine reduction in heavy drinking as measured by a change in the World Health Organization drinking risk levels
- Fully enrolled; completion 2023; trial sites in European Union and United Kingdom
- Data expected mid-2023

Features a **Sequential Parallel Comparison Study Design** to mitigate the high placebo response common in AUD trials
OPNT004, drinabant
Acute Cannabinoid Overdose (ACO)
Cannabinoid products, such as edibles, containing very high concentrations of THC are putting the public at risk of Acute Cannabinoid Overdose (ACO)

**Edibles**
Attorneys General issued warning over Halloween about the dangers of cannabis edibles with concentrations of THC meant to look like well-known snack foods.

6 year-old left unresponsive after accidentally eating a gummy with 50mg THC
Source: https://www.today.com/health/florida-mom-urges-safer-packaging-marijuana-edibles-t221213

**Synthetics**
First responders report seeing increasing numbers of overdoses from synthetic THC drugs in 2020

First responders see increase in K2 spice overdoses
Source: https://www.wtol.com/article/news/crime/first-responders-seeing-increase-in-k2-spice-overdoses/S12-3ae5ac86-d94d-4d3c-b8b2-6444c6d98606

**Symptoms**
Symptoms are similar to an acute psychotic episode and include: feelings of panic and anxiety, agitation, delirium, hallucinations, psychosis, tachycardia, and nausea/vomiting

High potency weed linked to psychotic episodes, mysterious vomiting illness in young users
"It felt like I didn't understand, I was trying to grab my intestines and pull them out," a Colorado man told NBC News.

https://www.nbcnews.com/health/health-news/high-potency-weed-linked-psychotic-episodes-mysterious-vomiting-illness-young-n1273463
More patients are presenting in the emergency department with physical or psychological symptoms of Acute Cannabinoid Overdose (ACO)

>1.7 million
Estimated ER visits associated with cannabis in 2019

3x
Cannabis-related ER visits in Colorado jumped threefold after legalization

No treatment for ACO
Means a medicine for the ER setting, used to reverse ACO, could have a major impact on patient care and provide health economic benefit

“California has seen a rise in emergency room visits related to cannabis poisoning among young children. In 2016, there were approximately 21 visits per one million Californians aged 0-5. In 2020, there were approximately 113 visits.”

“Hospital visits related to marijuana consumption are on the rise after legalization took effect in Illinois, doctors and other health officials said.”

Time is ripe for Opiant to lead in the development of a treatment in the emergency department to reverse ACO

Opiant is developing OPNT004, drinabant, a CB-1 antagonist licensed from Sanofi, as an injectable reversal agent to be used in an ER setting with aim to start phase 1 trial in 2023

**Proof of principle data**

In a Sanofi study of 36 subjects, oral drinabant blocked subjective and objective psychological and physiological effects of inhaled THC (incl. euphoria)

**Safety database**

Extensive safety database with oral drinabant, generated by Sanofi: Phase 1 and 2 studies on more than 700 subjects for up to 24 weeks

**Next steps**

Reformulate drinabant as an injection suitable for ER use
- IND enabling activities funded by NCATs division of NIH

Demonstrate ability of drinabant to reverse the effects of THC
### Anticipated key catalysts and growth drivers over the next 18 months

<table>
<thead>
<tr>
<th>2H 2022</th>
<th>1H 2023</th>
<th>2H 2023</th>
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<tbody>
<tr>
<td>OPNT003: NDA Submission</td>
<td>OPNT003: PDUFA</td>
<td>OPNT003: Launch</td>
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<tr>
<td>OPNT002: Ph 2 Study</td>
<td>OPNT002: Ph 2 Study Data</td>
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<tr>
<td>OPNT004: Complete IND enabling activities</td>
<td>OPNT004: Initiate Ph 1 Study</td>
<td></td>
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<tr>
<td>OPNT004: Pre-IND Meeting</td>
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Note: timeline events based on Company’s expectations as of March 2022
Opiant is well funded through to a potential close of the merger with Indivior

**Financial Position**

<table>
<thead>
<tr>
<th></th>
<th>Quarter ended September 30, 2022</th>
<th>Quarter ended June 30, 2022</th>
<th>Quarter ended March 31, 2022</th>
<th>Year ended December 31, 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash Balance</strong></td>
<td>$35.4</td>
<td>$40.2 million</td>
<td>$50.8 million</td>
<td>$53 million</td>
</tr>
<tr>
<td><strong>Debt</strong></td>
<td>$12.3 million</td>
<td>$14.3 million</td>
<td>$14.3 million</td>
<td>$16.9 million</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>$174,000*</td>
<td>$3.9 million</td>
<td>$4.5 million</td>
<td>$47.8 million</td>
</tr>
<tr>
<td><strong>Common Shares Outstanding</strong></td>
<td>5.1 million</td>
<td>5.1 million</td>
<td>5.1 million</td>
<td>4.9 million</td>
</tr>
<tr>
<td><strong>Fully Diluted Share Count</strong></td>
<td></td>
<td></td>
<td>8.5 million</td>
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</table>

- NIDA grant of $7.4 million and BARDA\(^1\) contract of up to $10.8 million funding OPNT003 development and NDA submission.
- Convertible debt financing (12/10/20); up to $40 million in two tranches; first tranche of $20 million funded 12/10/20; Up to half of outstanding loan can be converted into Opiant Common stock at $19.64 per share. $6.3 million converted as of 3/31/22.
- On November 13, 2022, Opiant and Emergent Biosolutions Inc. (EBS) settle legal dispute over royalties paid on NARCAN® Nasal Spray. The settlement includes a one-time payment and an exclusive license relating to NARCAN® Nasal Spray to EBS.

*No royalty revenue recorded as license agreement with EBS has been settled

\(^1\)The OPNT003 development project has been funded in part with Federal funds from the Department of Health and Human Services; Office of the Assistant Secretary for Preparedness and Response; Biomedical Advanced Research and Development Authority, under Contract No. HHSO100201800029C.
Contact us:

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Vice President Investor Relations
batkins@opiant.com