Company Presentation | March 2019

Development Stage Specialty Pharma Company focused on Addiction and Drug Overdose
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.
Investment highlights

1. Development stage specialty pharma company focused on addiction and drug overdose and a revenue stream via royalties from net sales of NARCAN® Nasal Spray.

2. Developed & licensed NARCAN® Nasal Spray to ADAPT Pharma. NARCAN® royalties provide funds to develop pipeline. Emergent BioSolutions acquired ADAPT for $735M highlighting the value of NARCAN® and potential of OPNT pipeline.

3. Lead asset OPNT003 is a long-acting, rapid onset nalmefene nasal spray for opioid overdose reversal. 505(b)(2) development path, aiming for NDA filing in 2020. $7.4M NIH grant and $4.6M BARDA contract, fully funds development.

4. OPNT002, nasal naltrexone for Alcohol Use Disorder (AUD) entering Phase 2. On demand dosing without prior abstinence requirement and harm reduction endpoint.

5. In-licensed drinabant from Sanofi (OPNT004). To be developed for the emergency reversal of Acute Cannabinoid Overdose, resulting in 1M ER visits in the USA.

6. OPNT005 is a heroin vaccine funded through Phase 1/2a clinical trials by the NIH. Opiant has exclusive development and commercialization rights to this vaccine.
Management team has extensive addiction and CNS drug development experience

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roger Crystal, MD, MRCS, MBA</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Phil Skolnick, PhD, DSc (hon)</td>
<td>Chief Scientific Officer</td>
</tr>
<tr>
<td>David O’Toole, CPA</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>Mark Ellison, PhD</td>
<td>VP, Development, Manufacturing and Quality</td>
</tr>
<tr>
<td>Quan Vu</td>
<td>VP, Corporate Development</td>
</tr>
</tbody>
</table>
Opiant is building upon its first marketed product, developing medicines for the treatment of addictions 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>NDA</th>
<th>FDA Approval</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioid Overdose</td>
<td>NARCAN® Nasal Spray / 505(b)(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>emergent</td>
</tr>
<tr>
<td>Opioid Overdose</td>
<td>OPNT003* Nalmefene Nasal Spray / 505(b)(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ADAPT PHARMA</td>
</tr>
<tr>
<td>Alcohol Use Disorder</td>
<td>OPNT002 Opioid Antagonist Nasal Spray / 505(b)(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SANOFI</td>
</tr>
<tr>
<td>Cannabinoid Overdose</td>
<td>OPNT004 Drinabant (CB-1 Antagonist)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Walter Reed National Military Medical Center</td>
</tr>
<tr>
<td>Opioid Use Disorder</td>
<td>OPNT005 Heroin Vaccine: hapten + liposome adjuvant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opioid Use Disorder</td>
<td>OPNT006 Opioid Antagonist Implant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Opiant’s expertise using opioid antagonists and nasal spray technology is used across many indications

<table>
<thead>
<tr>
<th>Delivery Method</th>
<th>Indication</th>
<th>Market Highlights</th>
<th>Development Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasal Spray</td>
<td>Opioid Overdose</td>
<td>2019 Net Sales expected &gt; $200M</td>
<td>Only program licensed to Adapt Pharma OPNT002: Phase 2 activities underway</td>
</tr>
<tr>
<td>Nasal Spray</td>
<td>Alcohol Use Disorder (AUD)</td>
<td>16.3M patients in the US</td>
<td>OPNT002: Phase 2 activities underway</td>
</tr>
<tr>
<td>Nasal Spray</td>
<td>Opioid Overdose</td>
<td>Synthetics involved in &gt;50% overdose deaths – more potent, longer acting agents needed</td>
<td>OPNT003: Pilot PK data: rapid onset, long half life 505(b)(2)</td>
</tr>
<tr>
<td>Implant</td>
<td>Opioid Use Disorder (OUD)</td>
<td>2017 Vivitrol Sales $269M</td>
<td>Feasibility studies underway</td>
</tr>
<tr>
<td>(undisclosed)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Opioid Antagonists**

- **Naloxone**: Nasal Spray, Opioid Overdose
- **Naltrexone**: Nasal Spray, Alcohol Use Disorder (AUD)
- **Nalmefene**: Nasal Spray, Opioid Overdose
- **(undisclosed)**: Implant, Opioid Use Disorder (OUD)
Opioid Overdose
In the USA, Opioid overdose is a public health crisis that has evolved into a ‘fentanyl crisis’

Drugs Involved in U.S. Opioid Overdose Deaths, 1999 to 2017

- **Heroin**, 15,958
- **Synthetic Opioids other than Methadone**, 29,406 (predominantly fentanyl)
- **Natural and semi-synthetic opioids**, 14,958
- **Methadone**, 3,295

*In 2017*

Estimated 70,200 drug overdose deaths:
- of which 48,000 contained opioids
- of which 55% were fentanyl related

- Opioid overdose deaths continue to increase in 2017
- Dramatic increase in deaths from synthetic opioids, especially fentanyl
- Fentanyl ~50-fold more potent than heroin
- Leading cause of death in American adults under the age of 50
- Opioids are the analgesic of choice...unlike anywhere else in the world

2. Fentanyl 50x= see slide 12 for sources
Substantial treatment population for opioid overdose reversal agents

Patients who are prescribed opioids are at risk of an overdose and safe prescribing should ensure patient access to a reversal agent.

- 2.5M OPIOID ADDICTS
  - 1.6M taking methadone, Suboxone...
  - x $90 per pack* = ~$2B Addressable Market*

- CO-PRESCRIBING MARKET: 245M
  - Opioid painkillers prescribed to over 20M patients***

*Company estimates including Opiant estimate of average selling price of NARCAN Nasal Spray
** Skolnick; Ann Rev Pharm Tox 2018
*** Volkow and McLellan, NEJM 2016
Opient developed the NARCAN® Nasal Spray (naloxone), which saves lives from opioid overdose.

Important for everyone to have access to naloxone, as recommended by Surgeon General¹:

- CVS and Walgreens pharmacies stock NARCAN® Nasal Spray
- Aetna, Harvard Pilgrim – zero copay on commercial policies
- Naloxone co-prescribing rules in many states including California, Virginia, and Arizona

OPNT003
Nasal Nalmefene for Opioid Overdose
55% of fatal opioid overdoses now involve fentanyl. Fentanyl is longer acting and 50x more potent than heroin:

- which may require more naloxone to initially resuscitate a patient
- Greater risk of relapse (renarcotization) once naloxone wears off

The use of naloxone may be particularly problematic in rural areas (~70% of U.S. land mass) where access to EMS may be delayed.

Fentanyl has been used as a chemical warfare agent.
OPNT003, Nasal Nalmefene, is a potent, long acting opioid antagonist with rapid onset, better suited for a fentanyl overdose.

Nalmefene is more potent than naloxone
5-fold higher affinity to mu-opioid receptors and hence, may be more effective at reversing fentanyl overdose.

Nalmefene is longer acting than naloxone
The FDA approved injectable nalmefene has a half life of ~10h, whereas naloxone has a half-life of 1 - 2 hours.

Data generated in the Phase 1 PK study demonstrates OPNT003 also has a half life of 6.7 -7.8 hours - greater potential to reduce the chance of renarcotization.

Nasal Nalmefene combined with Intravail is rapidly absorbed
OPNT003 contains Intravail, a proprietary absorption enhancer delivering rapid increases in nalmefene plasma levels.

OPNT003 has ideal properties to address the fentanyl crisis.
Phase 1 data for OPNT003, demonstrates rapid absorption and a long half life compared to injectable nalmefene.

Summary
OPNT003 contains nalmefene and Intravail, which accelerates absorption. Opiant has global exclusive license for Intravail.

Study Overview
Study performed under a CTA with NIDA using 13 healthy volunteers with intranasal arms blinded.*
Having developed NARCAN Nasal Spray, the same team aims to file an NDA for OPNT 003 in 2020

Development pathway confirmed and team able to execute

- Met with FDA, 505(b)(2) confirmed – similar development plan to NARCAN® Nasal Spray

Government endorsement and non dilutive funding

- $7.4M NIH grant and the BARDA contract for up to $4.6m cover all development expenses, including the NDA filing

Product protection

- Compelling PK profile of OPNT003 appears to be largely dependent on Intravail; Opiant has global Intravail license for use with all opioid antagonists
  - Additional patents filed

Large addressable market

- Emergent BioSolutions provided guidance of $220m to $250m in net sales of NARCAN Nasal Spray for the calendar year 2019
FDA has confirmed a 505(b)(2) pathway OPNT003, aiming for NDA filing in 2020 with all activities funded by NIDA and BARDA.
OPNT002
Nasal Naltrexone for Alcohol Use Disorder (AUD)
Despite alcohol abuse rates increasing, existing drugs are poorly tolerated and require specialist prescribing

- 16.3M Individuals in the US meeting DSM-V diagnostic criteria for AUD
- 1.4M Patients with AUD seeking treatment
- 0.4M Patients with AUD currently receiving pharmacotherapy

More effective & accessible pharmacotherapy expected to increase # of patients taking medication leading to improved outcomes
PRN dosing, a harm reduction endpoint, and no prior abstinence means OPNT002 addresses many limitations of existing medication.

<table>
<thead>
<tr>
<th>Existing Pharmacotherapies for AUD</th>
<th>OPNT002 Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstinence Requirement</strong></td>
<td>Taken whenever patients have the urge to drink (“as-needed basis”)</td>
</tr>
<tr>
<td>Best outcomes require abstinence prior to commencing medication</td>
<td></td>
</tr>
<tr>
<td><strong>Abstinence Outcome</strong></td>
<td>FDA accepts harm reduction as an outcome measure</td>
</tr>
<tr>
<td>Abstinence as only acceptable outcome for FDA approval</td>
<td></td>
</tr>
<tr>
<td><strong>Adherence</strong></td>
<td>“On-demand” dosing regimen, where improved compliance is expected</td>
</tr>
<tr>
<td>Low adherence for existing medication</td>
<td></td>
</tr>
</tbody>
</table>
Rapid nasal absorption vs oral ensures that the maximum amount of drug is present when it is most needed.

**Nasal naltrexone** absorption improved with Intravail.

**Faster nasal absorption** vs oral.

**Absorption of oral naltrexone** is minimal at 5-10 minutes.

Drinking alcohol causes the release of endorphins (endogenous opioids).

Naltrexone, an opioid antagonist, blocks endorphins released by alcohol.

Patients reduce heavy drinking by blocking the endorphin reward.

Source: Krieter et al; J Clin Pharm; 2019; 00(0); 1-11
FDA supports OPNT002 505(b)(2) development route

**OPNT002 Development Overview**

Meeting with FDA completed – 505(b)(2) regulatory pathway confirmed

2018 – Further optimization of formulation

2019 – Enroll patients in Phase 2

2021 – Enter Phase 3

Commercial assessment – potential to self-commercialize and target treatment centers, and sublicense primary care rights
OPNT004
CB-1 Antagonist for Acute Cannabinoid Overdose
Emergency hospitalizations from Acute Cannabinoid Overdose (ACO) have been rising, as evidenced in Colorado.

**Acute Cannabinoid Overdose**
Caused by excessive consumption of THC (primarily edibles) and synthetics (K2, Spice). Characterized by both opioid overdose and PCP-like features, with the severity related to the quantity, potency and type of cannabinoid ingested.

Source: Colorado Hospital Association Hospital Discharge Dataset, Statistics prepared by the Health Statistics and Evaluation Branch, Colorado Department of Public Health and Environment.
Synthetic cannabinoids and THC from ‘edibles’ are the primary drivers of Acute Cannabinoid Overdose (ACO)

<table>
<thead>
<tr>
<th>Synthetic Cannabinoids</th>
<th>Edibles: Tetrahydrocannabinol (THC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td>Includes HU 210 and CP 55940, with street names such as Spice, K2 and herbal incense; structurally unrelated to THC</td>
<td>Most commonly from “edibles” (often in the form of chocolates, candy, cookies); THC concentrates, such as waxes and oils</td>
</tr>
<tr>
<td>Easily accessible and not detected in urine screens for THC</td>
<td>High THC content relative to smoked cannabis</td>
</tr>
<tr>
<td>More potent (higher affinities at CB-1 receptors) and higher efficacies than THC: <strong>synthetic cannabinoids are to cannabis as fentanyl is to morphine</strong></td>
<td>Slower onset, often resulting in overconsumption</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
</tr>
<tr>
<td>NYC reported 8,000+ ER visits linked to synthetics between Jan 2015 – July 2016¹</td>
<td>Main cause of cannabis-related emergency room visits by adults</td>
</tr>
</tbody>
</table>

¹New York City Department of Health and Mental Hygiene (DOHMH), July 24, 2016.
The time is ripe for an ACO reversal product

Market Opportunity Drivers

Large Patient Population\(^1\)

- Emergency department visits from ACO: >1M annually
- Patient population expected to rise as more states legalize recreational use of THC products

ER departments need a reversal agent

- No FDA approved drug on the market (current treatment is symptomatic and supportive care)
- Unintended pediatric exposure, particularly with edibles
- Overburdening emergency rooms with intense monitoring and length of stay

Competitive Landscape

- No other drugs are currently in development to treat ACO

Targeted Market

- Addressable with small salesforce to target ~5,000 US emergency departments

High Visibility

- Heavily discussed topic in the 2016 Surgeon General’s Report on Alcohol, Drugs, and Health

\(^1\)National Emergency Department sample and United States Census Bureau figures, 2014.
Opiant is developing OPNT004 - drinabrant, a CB-1 antagonist licensed from Sanofi, for the emergency treatment of ACO

**Worldwide rights**
Opiant licensed exclusive global rights from Sanofi for the development and commercialization of drinabant, a high affinity, selective CB-1 receptor antagonist for the treatment of ACO

**Proof of principle data**
In a clinical study on 36 subjects conducted by Sanofi, oral administration of drinabant blocked both subjective and objective effects of inhaled THC (including euphoria)

**Safety Database**
Extensive safety database with oral drinabant, generated in Sanofi’s previous research development program, including multiple Phase 1 and 2 studies

**Next Steps**
**Injection reformulation:** oral drinabant’s has a slow onset of action; Opiant will reformulate drinabant for parenteral administration that can rapidly reverse the symptoms of ACO in an emergency setting

Demonstrate ability of drinabant to **reverse** the effects of THC
Finance and Milestones
NARCAN® Nasal Spray is licensed to Emergent BioSolutions and Opiant receives royalties

<table>
<thead>
<tr>
<th>Net Sales</th>
<th>Royalty Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to $50M</td>
<td>6%</td>
</tr>
<tr>
<td>$50M-$75M</td>
<td>7.5%</td>
</tr>
<tr>
<td>$75M-$100M</td>
<td>9%</td>
</tr>
<tr>
<td>$100-$200M</td>
<td>10%</td>
</tr>
<tr>
<td>&gt;$200M</td>
<td>12%</td>
</tr>
</tbody>
</table>

Potential annual payments to Opiant based on 2019 revenue guidance provided by Emergent BioSolutions

- Emergent BioSolutions provided guidance of $220 million to $250 million for calendar year 2019
- One time milestone of $13.5 million due to Opiant based on Net Sales above $200 million, in one calendar year
- Annual royalty stream of approximately $18 million to $21 million
Financial highlights

<table>
<thead>
<tr>
<th>($ millions)</th>
<th>Three months ended</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sept 30, 2018</td>
<td>June 30, 2018</td>
<td>Dec 31, 2017*</td>
</tr>
<tr>
<td>Cash Balance</td>
<td>$24.8</td>
<td>$11.2</td>
<td>$8.1</td>
</tr>
<tr>
<td>Debt</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Revenue</td>
<td>$4.4</td>
<td>$3.2</td>
<td>$11.7</td>
</tr>
<tr>
<td>Common Shares</td>
<td>3.8</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Outstanding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully Diluted Share</td>
<td>7.3 million of which 2.02 million options and shares held by Board and Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources of Funds = Strong Financial Position

- Annual Royalty Stream of approximately $20 million (does not include one-time milestone of $13.5 million that should be earned in 2019)
- NIDA grant of $7.4 million that will be used for development plan for OPNT003
- Awarded BARDA contract of up to $4.6m that accelerates OPNT003 development as a counter-measure against an attack
- September 2018 financing resulted in approx. $13m of gross proceeds, led by healthcare-focused institutional investors

*December 2017, Opiant changed its year end from July 31 to December 31
Expected milestones across the portfolio over next 12 months

<table>
<thead>
<tr>
<th></th>
<th>1Q 2019</th>
<th>2Q 2019</th>
<th>2H 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>NARCAN®</td>
<td>1Q Royalty</td>
<td>2Q Royalty</td>
<td>3Q/4Q Royalty</td>
</tr>
<tr>
<td>OPNT002 (AUD)</td>
<td>Phase 2 preparation</td>
<td></td>
<td>Enroll Patients for Phase 2</td>
</tr>
<tr>
<td>OPNT003 (OOR)</td>
<td></td>
<td>Pivotal PK Study</td>
<td>Pivotal PK Data</td>
</tr>
<tr>
<td>OPNT004 (ACO)</td>
<td></td>
<td>Manufacture API</td>
<td>Formulation development studies</td>
</tr>
</tbody>
</table>
## Investment highlights

<table>
<thead>
<tr>
<th></th>
<th>Development stage specialty pharma company focused on addiction and drug overdose and a revenue stream via royalties from net sales of NARCAN® Nasal Spray.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Developed &amp; licensed NARCAN® Nasal Spray to ADAPT Pharma. NARCAN® royalties provide funds to develop pipeline. Emergent BioSolutions acquired ADAPT for $735M highlighting the value of NARCAN® and potential of OPNT pipeline.</td>
</tr>
<tr>
<td>2</td>
<td>Lead asset OPNT003 is a long-acting, rapid onset nalmefene nasal spray for opioid overdose reversal. 505(b)(2) development path, aiming for NDA filing in 2020. $7.4M NIH grant and $4.6M BARDA contract, fully funds development.</td>
</tr>
<tr>
<td>3</td>
<td>OPNT002, nasal naltrexone for Alcohol Use Disorder (AUD) entering Phase 2. On demand dosing without prior abstinence requirement and harm reduction endpoint.</td>
</tr>
<tr>
<td>4</td>
<td>In-licensed drinabant from Sanofi (OPNT004). To be developed for the emergency reversal of Acute Cannabinoid Overdose, resulting in 1M ER visits in the USA.</td>
</tr>
<tr>
<td>5</td>
<td>OPNT005 is a heroin vaccine funded through Phase 1/2a clinical trials by the NIH. Opiant has exclusive development and commercialization rights to this vaccine.</td>
</tr>
</tbody>
</table>
Company Presentation | March 2019
Focused on Addiction and Drug Overdose