Filed by AcelRx Pharmaceuticals, Inc.
(Commission File No. 001-35068)
pursuant to Rule 425 under the Securities Act of 1933
and deemed filed pursuant to Rule 14a-12
under the Securities Exchange Act of 1934

Subject Company: Tetraphase Pharmaceutials, Inc.
(Commission File No. 001-35837)

Q4 2019 earnings and Tetraphase Acquisition call

March 16, 2019

AcelRx Pharmaceuticals, Inc.

Forward-looking statements and Non-GAAP financial measures

Forward-Looking Statements

Some of the information in this presentation is not historical in nature and may constitute forward-looking statements, which are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements may be identified by the use of forward-looking terminology such as "believes," "expects," "anticipates," "may," "will," "should," "seeks," "approximately," "intends," "plans," "estimates," or the negative of these words or other comparable terminology. The discussion of financial trends, strategy, plans or intentions may also include forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected, anticipated or implied by such statements. Although it is not possible to predict or identify all such risks and uncertainties, they may include, but are not limited to, those described in the Company's annual, quarterly and current reports (*i.e.*, Form 10-K, Form 10-Q and Form 8-K) as filed or furnished with the Securities and Exchange Commission (SEC). You are cautioned not to place undue reliance on any such forward-looking statements, which speak only as of the date such statements were first made. To the degree financial information is included in this presentation, it is in summary form only and must be considered in the context of the full details provided in the Company's most recent annual, quarterly or current report as filed or furnished with the SEC. The Company's SEC reports are available at www.acelrx.com under the "Investors" tab. Except to the extent required by law, the Company undertakes no obligation to publicly release the result of any revisions to these forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events.

Non-GAAP Financial Measures

To supplement AcelRx's financial results and guidance presented in accordance with U.S. generally accepted accounting principles (GAAP), the company uses certain non-GAAP financial measures in this presentation, in particular, excluding stock-based compensation expense from its operating expenses. The company believes that this non-GAAP financial measure provides useful supplementary information to, and facilitates additional analysis by, investors and analysts.

AcelRx acquires Tetraphase in a stock for stock deal

AcelRX Pharmaceuticals, Inc.

TETRAPHASE PHARMACEUTICALS

AcelRX Pharmaceuticals, Inc.

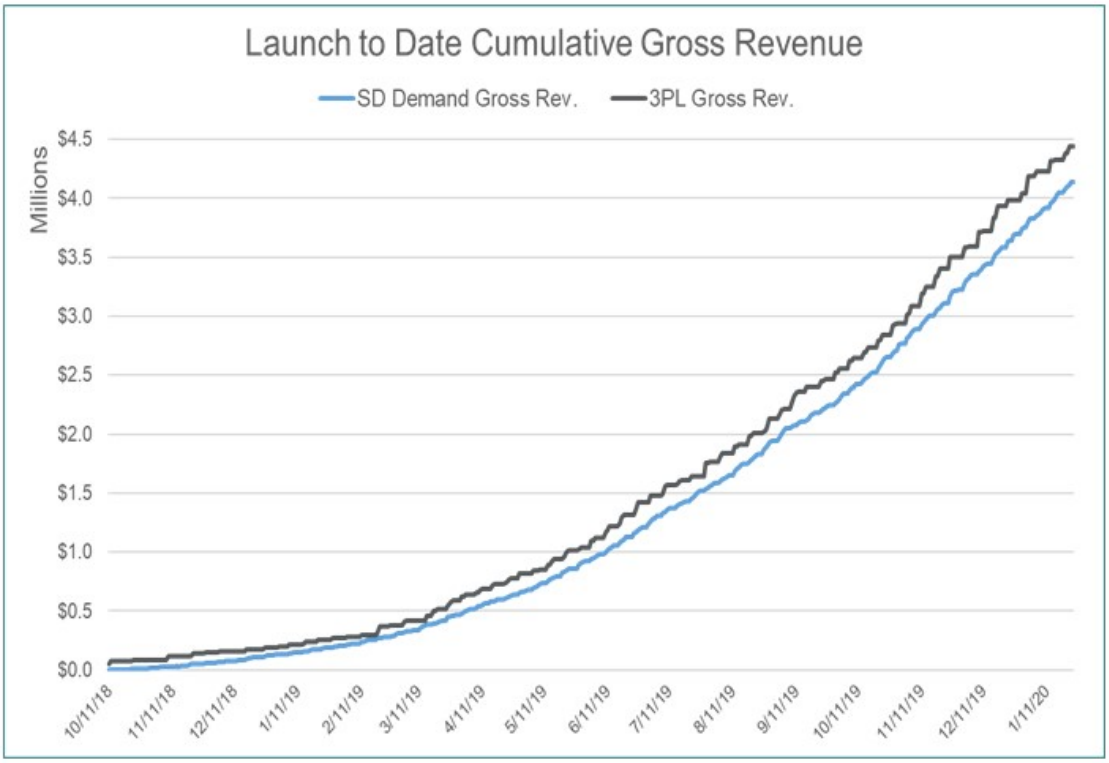
XERAVA: Launched in the U.S.

XERAVA™
(eravacycline) for injection

XERAVA (eravacycline) for the treatment of complicated intra-abdominal infections in patients 18 years of age and older

- FDA approved on August 27, 2018
- EMA approved on September 20, 2018
- Launched in the U.S. in mid-October 2018
- Label supports broad use

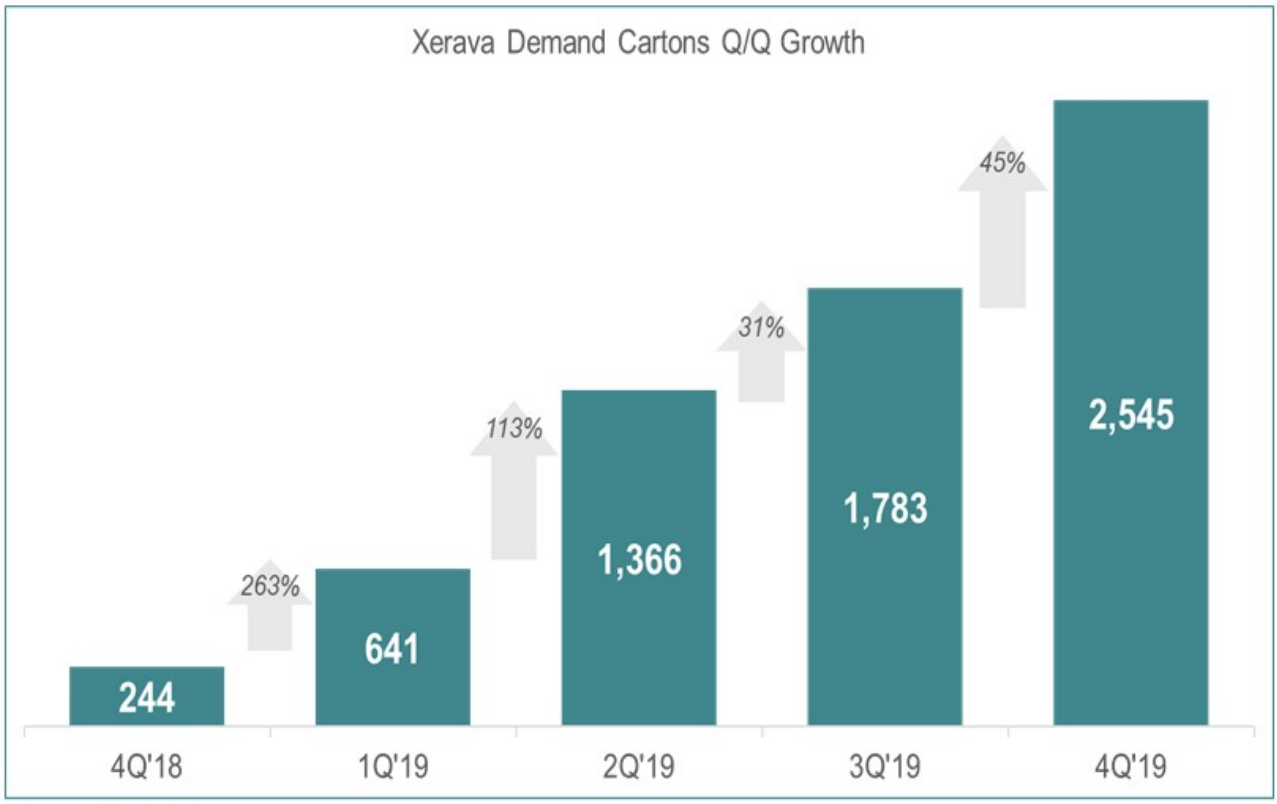
XERAVA gross revenues



- A different molecule leads to a different antibiotic launch
  - No stocking the retail channels to inflate revenue, Demand revenue mirrors Wholesaler revenue
- Patient days of Therapy for IV antibiotics are **>3 fold** any recent launch
- **Triple** to **Double digit** quarter over quarter growth in 2019
- On formulary or available at **1200** institutions
- Strong start to 2020 trending to have **double digit** quarterly growth vs Q4 2019
- Ample supply to address the challenges we are currently facing

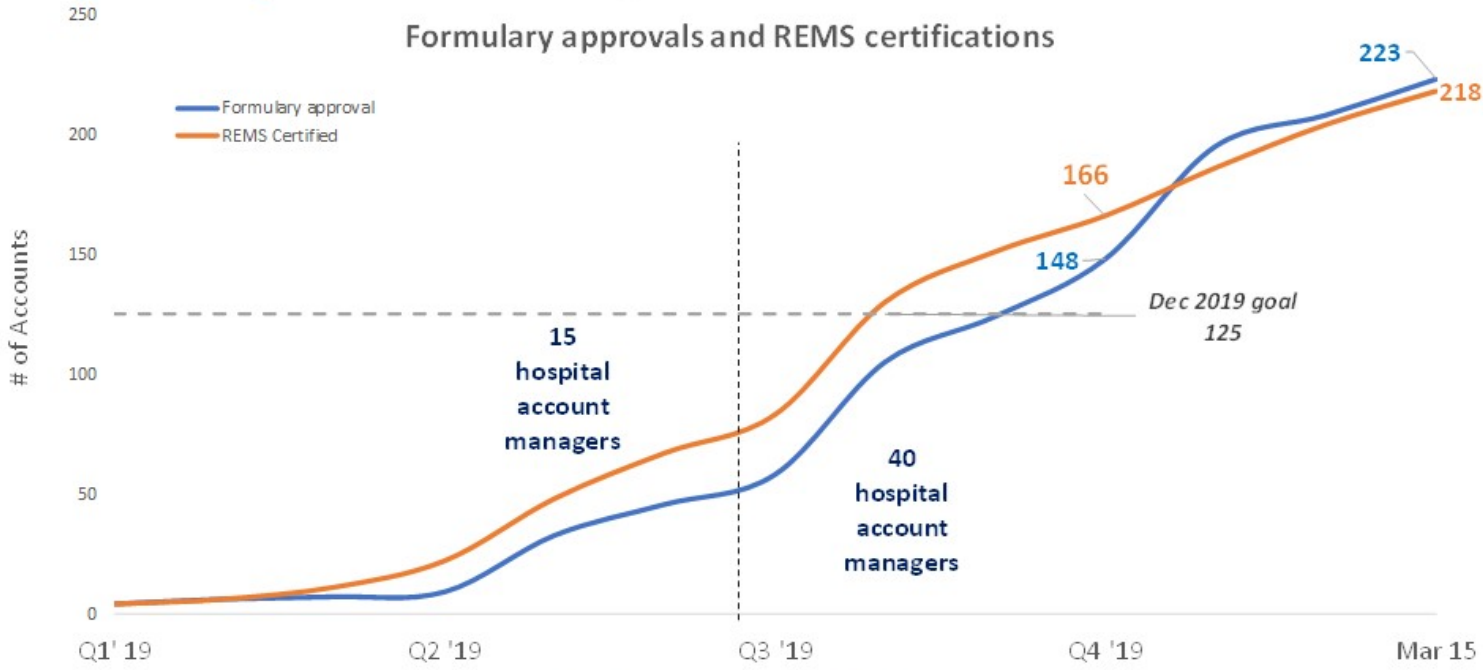
AcelRx Pharmaceuticals, Inc.

XERAVA quarterly carton growth



Source: 867 thru 12/31/19

166 REMS-certified facilities and 148 formulary approvals exceeded year-end goal of 125 for each; 218 and 223, respectively as of March 15, 2020



465
Target 2020 formulary approvals

465
Target 2020 REMS-certified facilities

AcelRx Pharmaceuticals, Inc.

Important safety information for DSUVIA

LIMITATIONS OF USE

Not for home use or for use in children. Discontinue treatment with DSUVIA before patients leave the certified medically supervised healthcare setting. Not for use for more than 72 hours. The use of DSUVIA beyond 72 hours has not been studied. Only to be administered by a healthcare provider.

Because of the risks of addiction, abuse, and misuse with opioids, even at recommended doses, reserve DSUVIA for use in patients for whom alternative treatment options [e.g., non-opioid analgesics or opioid combination products]: have not been tolerated, or are not expected to be tolerated, have not provided adequate analgesia, or are not expected to provide adequate analgesia.

IMPORTANT SAFETY INFORMATION

The Full Prescribing Information for DSUVIA contains the following Boxed Warning:

WARNING: ACCIDENTAL EXPOSURE AND DSUVIA REMS PROGRAM: LIFE-THREATENING RESPIRATORY DEPRESSION; ADDICTION, ABUSE AND MISUSE; CYTOCHROME P450 3A4 INTERACTION; AND RISKS FROM CONCOMITANT USE WITH BENZODIAZEPINES OR OTHER CNS DEPRESSANTS

Accidental Exposure and DSUVIA REMS Program:

Accidental exposure to or ingestion of DSUVIA, especially in children, can result in respiratory depression and death. Because of the potential for life-threatening respiratory depression due to accidental exposure, DSUVIA is available only through a restricted program called the DSUVIA REMS Program. DSUVIA must only be dispensed to patients in a certified medically supervised healthcare setting. Discontinue use of DSUVIA prior to discharge or transfer from the certified medically supervised setting.

Life-Threatening Respiratory Depression:

Serious, life-threatening, or fatal respiratory depression may occur with the use of DSUVIA. Monitor for respiratory depression, especially during initiation of DSUVIA.

Addiction, Abuse, and Misuse:

DSUVIA exposes patients and other users to the risks of opioid addiction, abuse, and misuse, which can lead to overdose and death. Assess patient's risk before prescribing DSUVIA, and monitor all patients regularly for the development of these behaviors or conditions.

Cytochrome P450 3A4 Interaction:

The concomitant use of DSUVIA with cytochrome P450 3A4 inhibitors may result in an increase in sufentanil plasma concentrations, which could increase or prolong adverse drug reactions and may cause potentially fatal respiratory depression. In addition, discontinuation of a concomitantly used cytochrome P450 3A4 inducer may result in an increase in sufentanil plasma concentration. Monitor patients receiving DSUVIA and any CYP3A4 inhibitor or inducer.

Risks From Concomitant Use With Benzodiazepines or Other CNS Depressants:

Concomitant use of opioids with benzodiazepines or other central nervous system (CNS) depressants, including alcohol, may result in profound sedation, respiratory depression, coma, and death. Reserve concomitant prescribing for use in patients for whom alternative treatment options are inadequate; limit dosages and durations to the minimum required; and follow patients for signs and symptoms of respiratory depression and sedation.

DSUVIA is contraindicated in patients with significant respiratory depression; acute or severe bronchial asthma in an unmonitored setting or in the absence of resuscitative equipment; known or suspected gastrointestinal obstruction, including paralytic ileus; and known hypersensitivity to sufentanil or components of DSUVIA. DSUVIA contains sufentanil, a Schedule II controlled substance. As an opioid, DSUVIA exposes users to the risks of addiction, abuse, and misuse. Potential serious adverse events caused by opioids include addiction, abuse, and misuse, life-threatening respiratory depression, neonatal withdrawal syndrome, risks of concomitant use or discontinuation of cytochrome P450 3A4 inhibitors and inducers, risks from concomitant use with benzodiazepines or other CNS depressants, risk of life threatening respiratory depression in patients with chronic pulmonary disease or in elderly, cachectic, or debilitated patients, adrenal insufficiency, severe hypotension, risks of use in patients with increased intracranial pressure or impaired consciousness, gastrointestinal disorders and seizure disorders. DSUVIA should be used with caution in patients with severe liver or kidney impairment.

For Important Safety Information including full prescribing information, visit: www.DSUVIA.com.

AcelRx Pharmaceuticals, Inc.

Achieved 2019 objectives, building the foundation for growth in 2020

	Q1	Q2	Q3	Q4
125 formulary approvals / REMS-certified facilities by year-end **			✓	✓
Hire 25 new hospital account managers, targeting 40 by beginning of Q3		✓		
Resubmit Zalviso NDA				
Quarterly operating expense not exceeding $15M to $18M *	✓	✓	✓	✓
Refinance senior debt		✓		

** awaiting FDA opioid approval policy finalization*

* *Combined R&D and SG&A, including ~$2M/qtr of non-cash stock-based comp; $13M to $16M quarterly operating expense excluding stock-based compensation*

** *Added REMS certified facilities metric in Q2*

AcelRx Pharmaceuticals, Inc.

Financial information and metrics

223
Formulary approvals at March 15, 2020

218
REMS certified facilities at March 15, 2020

465
target formulary approvals and REMS certs. by year-end 2020

$2.3M
FY19 revenues

$9-12M
2020 operating expense guidance*

$66.1M
Dec 2019 cash

** Combined R&D and SG&A, excluding non-cash stock-based comp*

AcelRx Pharmaceuticals, Inc.

For more information, visit:
www.acelrx.com

For Important Safety Information including full prescribing information, visit: www.DSUVIA.com.

AcelRx Pharmaceuticals, Inc.

Additional Information and Where to Find It
In connection with the proposed transaction between AcelRx Pharmaceuticals, Inc. (AcelRx) and Tetraphase Pharmaceuticals, Inc. (Tetraphase), AcelRx will file with the SEC a registration statement on Form S-4 that will include a document constituting a prospectus of AcelRx and will also contain a proxy statement of Tetraphase. AcelRx and Tetraphase also plan to file other relevant documents with the SEC regarding the proposed transactions. After the registration statement on Form S-4 is declared effective by the SEC, a definitive proxy statement/prospectus will be mailed to the stockholders of Tetraphase. INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE PROXY STATEMENT/PROSPECTUS AND OTHER RELEVANT DOCUMENTS FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION. Investors and security holders will be able to obtain free copies of the registration statement on Form S-4 and the proxy statement/prospectus (when available) and other relevant documents filed or that will be filed by AcelRx or Tetraphase with the SEC through the website maintained by the SEC at http://www.sec.gov. Copies of the documents filed with the SEC by AcelRx will be available free of charge within the Investors section of AcelRx's website at http://ir.acelrx.com. Copies of the documents filed with the SEC by Tetraphase will be available free of charge within the Investors section of Tetraphase's website at https://ir.tphase.com/investor-relations.

Participants in the Solicitation
Each of AcelRx and Tetraphase and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from Tetraphase stockholders in connection with the proposed transaction. Information about AcelRx's directors and executive officers is included in the definitive proxy statement for its 2019 annual meeting of stockholders, which was filed with the SEC on May 14, 2019. Information about Tetraphase's directors and executive officers is included in Tetraphase's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, which was filed with the SEC on March 12, 2020. Other information regarding the participants in the solicitation of proxies in connection with the proposed transaction and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the proposed transaction when they become available. When available, investors may obtain free copies of these documents from AcelRx or Tetraphase as indicated above.

No Offer or Solicitation
This communication is being made in respect of the proposed transaction involving AcelRx and Tetraphase. This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities nor a solicitation of any vote or approval with respect to the proposed transaction or otherwise. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended, and otherwise in accordance with applicable law.