UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

Current Report

Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): September 8, 2017

RESPIRERX PHARMACEUTICALS INC.
(Exact name of registrant as specified in its charter)

Delaware	**1-16467**	**33-0303583**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(I.R.S Employer Identification No.)**

126 Valley Road, Suite C **Glen Rock, New Jersey** **(Address of principal executive offices)**	**07452** **(Zip Code)**

Registrant's telephone number, including area code: (201) 444-4947

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company [ ]

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. [ ]

Item 7.01 Regulation FD Disclosure

On September 8, 2017, RespireRx Pharmaceuticals Inc. (the "Company") announced that the Company's President, Chief Executive Officer and Vice Chairman of the Board of Directors James S. J. Manuso, Ph.D., will be presenting at the 2017 Rodman & Renshaw Conference at The Palace Hotel, New York, New York. Dr. Manuso is currently scheduled to present at 1:45 p.m. Eastern Time on Tuesday, September 10, 2015.

Dr. Manuso will discuss RespireRx's successfully completed Phase IIB clinical trial of dronabinol in the treatment of obstructive sleep apnea, and will present the results of a Phase IIA trial evaluating the ability of CX-1739 (oral) to antagonize the drug-induced respiratory depression produced by the powerful opioid, remifentanil. He will also provide updated information and clinical development plans for the company's pipeline products.

The slide presentation that Dr. Manuso will be using at the conference is attached as Exhibit 99.1 and is being furnished and not filed pursuant to Item 7.01 of Form 8-K. The presentation will be available by live webcast and will be archived. The live webcast and archive can be accessed by going to:

http://wsw.com/webcast/rrshq27/rspi

The press release announcing the Company's participation in the conference is attached as Exhibit 99.2 to this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits.

A list of exhibits required to be filed as part of this report is set forth in the Exhibit Index, which is presented elsewhere in this document, and is incorporated herein by reference.

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: September 8, 2017

RESPIRERX PHARMACEUTICALS INC.
(Registrant)

By: */s/ Jeff E. Margolis*
Jeff E. Margolis
Vice President, Treasurer and Secretary

EXHIBIT INDEX

Exhibit Number	Exhibit Description
99.1	Slide Presentation*
99.2	Press Release dated September 8, 2017*

* Furnished herewith.

RespireRx Pharmaceuticals Inc

OTC QB: RSPI

James S. Manuso, Ph.D., President & CEO

2017 Rodman & Renshaw Conference
New York, September 12, 2017

Medicines for Respiratory Diseases

Forward Looking Statements

RespireRx Pharmaceuticals Inc

The matters discussed in this presentation that are not historical facts are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and we intend that such forward-looking statements be subject to the safe harbor created thereby. Forward-looking statements include, but are not limited to, statements containing the words "believes," "anticipates," "intends," "estimates," "plans," "expects," "projects" and words of similar import. Readers are cautioned not to place undue reliance on these forward-looking statements, which are based on the information available to management at this time and which speak only as of the date of this presentation. The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements of the Company or its industry to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. All forward-looking statements should be evaluated with the understanding of their inherent uncertainty and in the context of the Company's filings with the Securities and Exchange Commission, including the risk factors contained therein. While the Company believes the information contained herein is reliable, the Company makes no representations or warranties regarding the accuracy or completeness of this information.

Breath

RespireRx Pharmaceuticals Inc

"Breath is the universal factor of life. We are born the first time we inspire, and we die the last time we expire. Breath is life itself. In Sanskrit the same word means both breath and life."

.....Abbot George Burke

Innovative Medicines for Respiratory Diseases

RespireRx Pharmaceuticals Inc

Corporate Overview

Focused on the development of drug candidates to treat very large respiration related markets that are unmet; efforts involving sleep apnea/hypopnea, respiratory depression and respiratory distress

Value Drivers

- Cannabinoid: Dronabinol (D9-THC)
  - Treatment of Obstructive Sleep Apnea (OSA)
  - Phase 3 ready
- Ampakines: CX1739, CX717 & CX1942
  - Opioid induced respiratory depression (RD) and central sleep apnea
  - 3 successful phase 2A trials for CX1739 and CX717
  - Pre-IND studies for CX1942

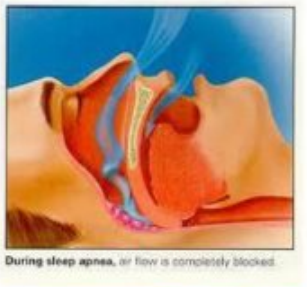
Compound	Indication	Preclinical	Phase 1	Phase 2
Dronabinol	Obstructive Sleep Apnea	→	→	→
CX1739	Opioid Induced Sleep Apnea	→	→	→
	Spinal Cord Injury	→	→	
CX717	Spinal Cord Injury	→	→	
CX1942	Drug-induced RD (Soluble Formulations)	→		

Sleep Apnea: A National Health Epidemic

RespireRx Pharmaceuticals Inc

3 Types of Sleep Apnea

- **Obstructive** (OSA) - a peripheral phenomenon that occurs when throat muscles intermittently relax and block airway during sleep
  - May be accompanied by snoring
- **Central** (CSA) – a brain-mediated phenomenon that occurs when breathing control centers in the brain reduce activity
  - Frequently caused by opioid consumption
- **Mixed** - a combination of OSA and CSA



During sleep apnea, air flow is completely blocked.

Over 35 million Americans stop breathing every night from 5-50 times per hour

THIS IS NOT MERELY SNORING!

Sleep Apnea and its Measurement

RespireRx Pharmaceuticals Inc

- **Apnea:** Cessation of breathing for ≥ 10 seconds
- **Hypopnea**: Abnormal severe slowing of breathing for ≥ 10 seconds
- **Apnea - Hypopnea Index (AHI)**: Average number of apnea-hypopnea events per hour during sleep (indicator of the severity of sleep apnea)
- **Severity of Sleep Apnea:**
  - Normal: AHI <5 incidents per hour
  - Mild: 5≤ AHI <15 incidents per hour
  - Moderate: 15≤ AHI <30 incidents per hour
  - Severe: AHI ≥30 incidents per hour

Company Focus: CNS-Based Respiratory Diseases

RespireRx Pharmaceuticals Inc

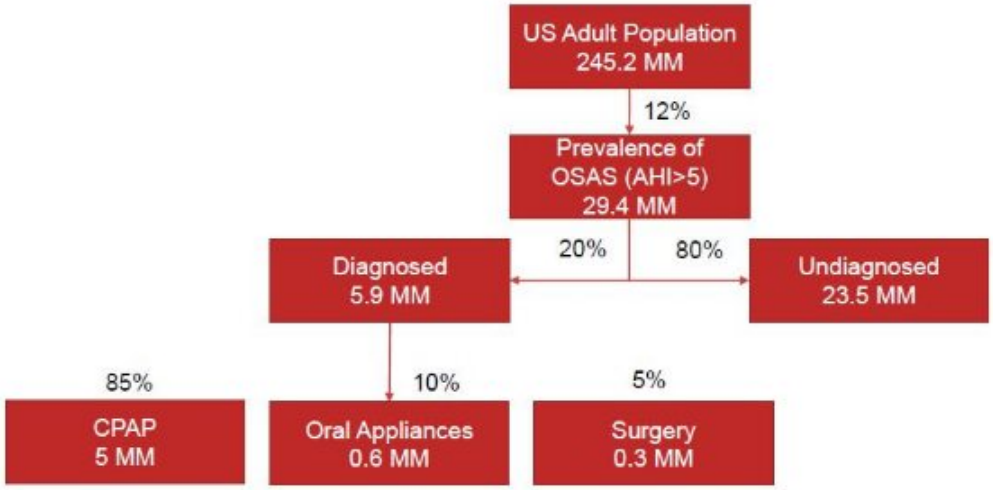
- Dronabinol
  - Obstructive Sleep Apnea
- Ampakines
  - Opioid Induced Apnea & Hypopnea
  - Spinal Cord Injury
  - Orphan Diseases (Pompé, Fragile X)

Dronabinol: Breakthrough Treatment for Obstructive Sleep Apnea

RespireRx Pharmaceuticals Inc

OSAS Affects Nearly 30 Million People in the US With No Approved Drug Therapies

RespireRx Pharmaceuticals Inc

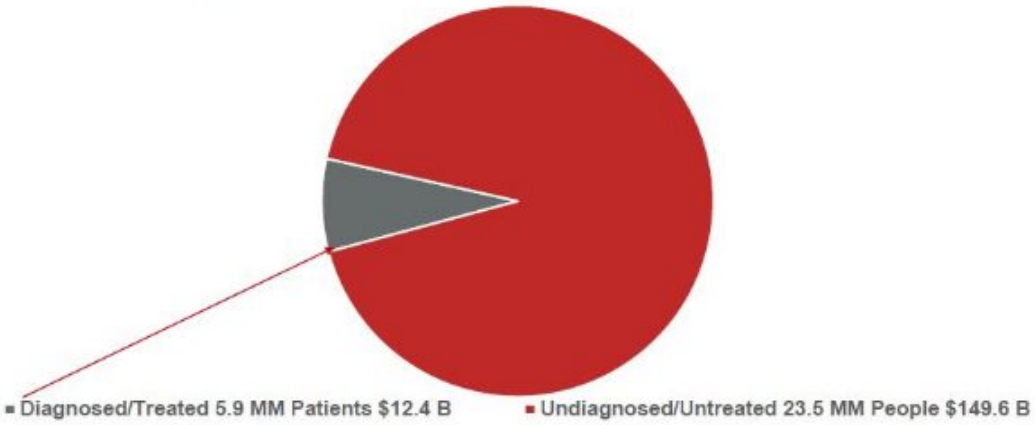


Source: U.S. Census (2014) Am J Epidemiol. 2013 May 1;177(9):1006-14. doi: 10.1093/aje/kws342. Epub 2013 Apr 14.
Frost & Sullivan Report for the American Academy of Sleep Medicine

The Economic Impact of OSAS in the US is $162 Billion

RespireRx Pharmaceuticals Inc

Only 20% of Sleep Apnea Patients are Diagnosed



Source: Am J Epidemiol. 2013 May 1;177(9):1006-14. doi: 10.1093/aje/kws342. Epub 2013 Apr 14.
Frost & Sullivan Report for the American Academy of Sleep Medicine

OSA – Costs of the Problem in the US

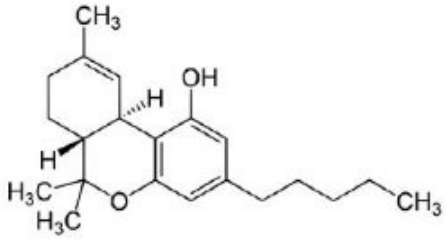
RespireRx Pharmaceuticals Inc

Disease State	Estimated US Prevalence	Annual Cost to US Economy	Annual Indicated Drug Therapy Expenditures
OSA[1-5]	29.4 Million	$162.0 Billion	$ 0
Asthma[6,7]	16.4 Million	$18.3 Billion	$13.5 Billion
Hypertension[8-10]	43.2 Million	$73.4 Billion	$48.5 Billion
Diabetes[11,12]	23.5 Million	$174 Billion	$20.6 Billion

1 Obstructive sleep apnea and sleep. National Sleep Foundation Web site.
2 Manufacturer Recommendations
3 Qualitative Market Research, Physician / Patient interviews, 2010
4 CPAP Supply USA.
5 American Sleep Apnea Association, 2010
6 Asthma & Allergy Foundation of America
7 Espicom Business Intelligence's New Drug Futures, 2006
8 Burt, V., et al., Hypertension, 2005
10 Lloyd-Jones, D., et al., Circulation 119(3):e21-181, 2009
10 Acmite Market Intelligence, 2008
11 Arrowhead, Global Diabetes Market, 2006
12 American Diabetes Assoc., 2007

Dronabinol: A Breakthrough Treatment for OSA

RespireRx Pharmaceuticals Inc



- Dronabinol is Δ9-THC
- Oral, small molecule
- Cannabinoid receptor agonist
- Reduces apnea by acting on spinal ganglia controlling muscle tone in throat
- Positive Phase 2A and 2B clinical trials in OSA

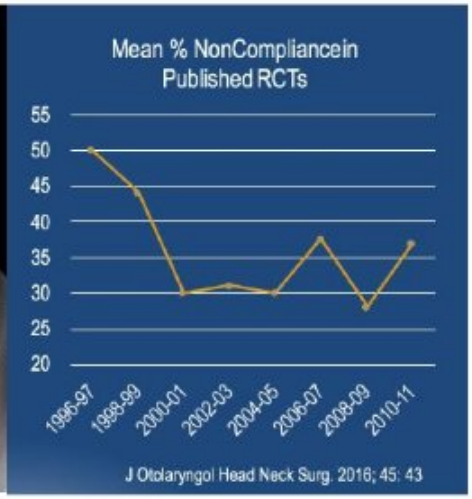
- **Dronabinol Background**
  - FDA approved for the treatment of anorexia in AIDS patients and nausea and vomiting in cancer patients undergoing chemotherapy (Marinol®)
  - Schedule III drug available by prescription, with a low risk of addiction
- **Intellectual Property**
  - Exclusive worldwide license from the University of Illinois
  - Patents issued for the use of dronabinol in the treatment of OSA
  - Pending patents on dosage and modified release formulations
- **NIH Support**
  - >$5MM NIH-funded grant PACE Phase 2B trial in OSA

CPAP Efficacy is Greatly Limited by Patient Compliance

RespireRx Pharmaceuticals Inc

There are No Approved Medicines for the Treatment of OSA

- 30% of patients prescribed CPAP never initiate treatment when prescribed a machine
- Over 50% of patients stop using CPAP in the first year
- Dronabinol Indication for Patients who Cannot or Will Not Tolerate CPAP



THE PACE Clinical Trial: Pharmacotherapy of Apnea by Cannabimimetic Enhancement

RespireRx Pharmaceuticals Inc

PACE INVESTIGATORS

David W. Carley, PhD

Bharati Prasad, MD

Hui Xie, PhD

Boris Vern, MD, PhD

Chengbo Yuan

Phyllis Zee, MD, PhD

Kathryn Reid, PhD

Roneil Malkani, MD

Hryar Attarian, MD

Sabra Abbott, MD, PhD

The PACE Clinical Trial was funded by the National Heart, Lung & Blood Institute of NIH with Grants:
UM1HL112856
UL1TR001422
UL1TR002003

PACE nhancement: annabimimetic

Completed Phase 2B PACE Trial in OSA

RespireRx Pharmaceuticals Inc

- **Study Design**
  - Six week, double-blind, placebo controlled clinical study in patients with OSA
  - Conducted by University of Illinois at Chicago and Northwestern University
- **Dosage / Administration**
  - Placebo, 2.5 mg, or 10 mg dronabinol at night
- **Results**
  - 56 evaluable patients completed study
    - Placebo, n = 17
    - 2.5 mg dronabinol, n = 19
    - 10 mg dronabinol, n = 20
  - Statistically significant improvement in Primary Outcome Measures
    - Apnea-Hypopnea Index (AHI) (2.5 and 10 mg)[1]
    - ESS Sleepiness Scale (10 mg)[2]
    - Overall Patient Satisfaction (10 mg)[3]

Fully funded by NIH ~$5 Million

[1] $p<.02$ and $p<.001$, respectively, compared to placebo
[2] $p<.001$, compared to placebo
[3] $p<.02$, compared to placebo

THE PACE Clinical Trial: Pharmacotherapy of Apnea by Cannabimimetic Enhancement – A Phase 2B Study

RespireRx Pharmaceuticals Inc

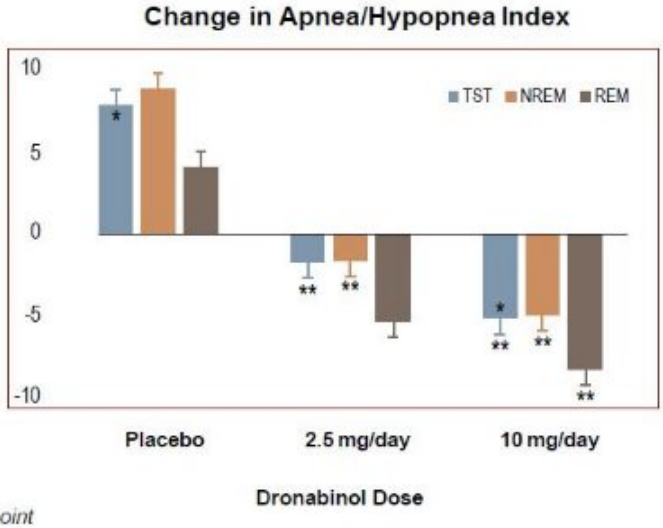
- Randomized, Placebo-controlled, Parallel Groups, Multi-site Trial in Patients with Moderate to Severe OSA
- Study Drug: Dronabinol (Overencapsulated Marinol®): 2.5 mg or 10 mg QD
- Dose Administration: 60 minutes before bedtime
- Inclusion: Age 21 – 64; AHI 15 – 50; Epworth Sleepiness Scale (ESS) ≥ 7; Body Mass Index (BMI) ≤ 45
- Exclusion: Shift Work or OSA Tx within 1 mo; Medical Co-morbidity; Psych Dx; CNS Active Meds

PACE Enhancement Cannabimimetic

Results of 6-Week Treatment: Dronabinol Reduces AHI+

RespireRx Pharmaceuticals Inc

Positive Effects of Dronabinol vs. Placebo in TOTAL, REM & NREM Sleep Demonstrate Efficacy



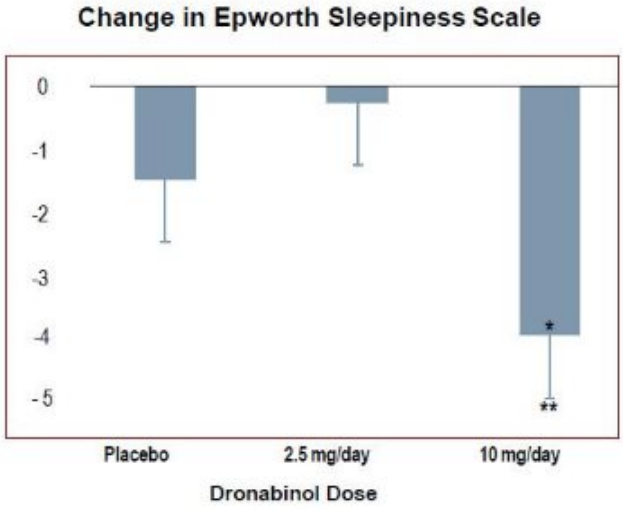
*P=0.02
**P-0.001

PACE Enhancement Cannabimimetic

+ Primary Endpoint

Dronabinol Reduces Daytime Sleepiness+

RespireRx Pharmaceuticals Inc



*p-0.02
**P-0.001

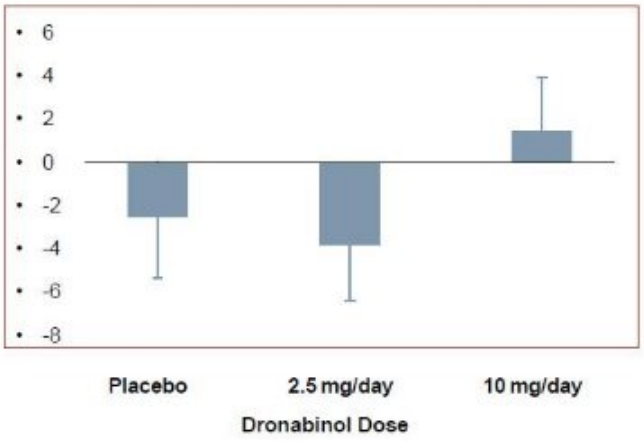
PACE Enhancement Cannabimimetic

+ *Primary Endpoint*

Dronabinol Improves MWT

RespireRx Pharmaceuticals Inc

Change in Mean Wakefulness Testing (MWT)



PACE Enhancement Cannabimimetic

Dronabinol Has an Excellent Safety Profile with Significant Improvements in Patient Satisfaction

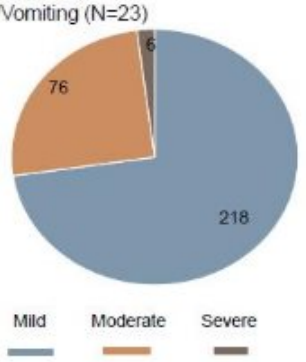
RespireRx Pharmaceuticals Inc

TSQM Response: End of Treatment

Tx Response	Placebo	2.5 mg/day	10 mg/day
Extremely Dissatisfied	3	2	1
Very Dissatisfied	1	2	0
Dissatisfied	0	3	0
Somewhat Satisfied	5	6	4
Satisfied	1	4	4
Very Satisfied	5	1	5
Extremely Satisfied	1	1	6
Total	16*	19	20

p=0.04 for Tx Effect
*TSQM data missing for one placebo subject

- Average Number of AEs = 4.1±4.0
  - Did not differ by Tx group
  - Black Ss reported more (5.4±5.1) AEs than White Ss (2.9±2.3; p = 0.03)
- Most Frequent Verbatim AEs Reported
  - Sleepiness/Drowsiness (N=25)
  - Headache (N=24)
  - Nausea/Vomiting (N=23)



Dronabinol – Phase 3 Regulatory Strategy*

RespireRx Pharmaceuticals Inc

- Meet with FDA during Q1/2018
- Finalize the Phase 3 trial plan required for approval
- Position dronabinol as a breakthrough medicine
- Seek fast track designation
- Facilitate and hasten the development path

* Pending Finance

FDA Expedited Approval Opportunities for Dronabinol

RespireRx Pharmaceuticals Inc

Breakthrough Therapy Designation	Preliminary clinical data	Substantial improvement on clinically significant endpoint(s) over available therapies ***No Drug Therapy for OSAS***	More frequent meetings with FDA More frequent FDA communication Rolling review Intensive guidance on an NDA FDA help to expedite development
Accelerated Approval Pathway	Not specified; Sponsor should make justification of alternate endpoint based scientific support	Generally provides a meaningful advantage over available therapies AND demonstrates an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or a clinical endpoint that can be measured earlier than irreversible morbidity or mortality ***Cannot or Will Not Use CPAP***	Approval based on a surrogate or intermediate endpoint (often allows for shorter development time) Note: FDA requires clinical trials to be conducted post-approval to confirm clinical benefit ***AHI & ESS Endpoints***
Priority Review Designation	Data contained in the final NDA submission	Significant improvement in safety or effectiveness of the treatment, prevention, or diagnosis of a serious condition ***OSAS Health & Economic Impact***	Review of application in 6 months

Dronabinol in the Marketplace: Strategies to Capture the Sleep Market

RespireRx Pharmaceuticals Inc

- **Issued Method-of-Use Patents**
  - Expires in 2025
  - Pending patent applications to 2030 & beyond
- **FDA Designations for Market Exclusivity**
  - Fast-Track
  - Breakthrough
  - Hatch-Waxman
- **Develop a "Branded Generic" Formulation of Dronabinol (R-Nabinol) for Phase 3 Pivotal Trial**
- **Develop Proprietary Dosage Formulations for Product Line Extensions**
  - Low dose
  - Extended release
  - Combinations
- **Execute Commercial & Market Strategies**
  - Pricing
  - Formulary
  - Education
  - Advocacy

The Dronabinol Opportunity

RespireRx Pharmaceuticals Inc

Impact on Patient	Commercial Potential
First medicine available for OSA	Changes the nature of OSA treatment
Ease of Use/Better Patient Compliance	Broadly expands prescriber base from sleep specialists to include primary care physicians and cardiologists
Low cost	Recurring lifetime sales versus one time sale or ongoing rental of a device
Safe and effective	Market will expand into the currently undiagnosed/untreated population
Potential for better cardiovascular outcomes	Potential for reducing systemic healthcare costs by reduced cardiac re-hospitalizations

Ampakines for Opioid Induced Apneas

RespireRx Pharmaceuticals Inc

The Opioid Epidemic - Prologue

RespireRx Pharmaceuticals Inc

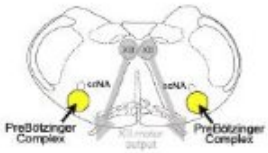
1. Over 200 million opioid prescriptions are written annually and approximately 52,000 Americans died in 2015 from opioid overdose. The epidemic continues, as an estimated 60,000 people died in 2016.
2. Approximately 11 millions Americans take chronic opioids for pain management. 50% of patients on chronic opioid therapy have central sleep apnea[1].
3. The cause of death is the respiratory depression produced by opioids.
4. The majority of opioid-induced fatalities occurred in patients who did not have a history of, nor were diagnosed with, a substance abuse disorder.
5. The primary complication is that tolerance to the analgesic and euphoric effects of opioids develops rapidly, leading to the need for increasing doses, while tolerance develops less to the respiratory depressant effects.
6. Sleep apnea is a primary risk factor for opioid overdose[2].

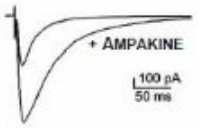
[1] Rose AR, Catcheside PG, McEvoy RD, Paul D, Kapur D, Peak E, Vakulin A, Antic NA. J Clin Sleep Med 2014;10(8):847-852

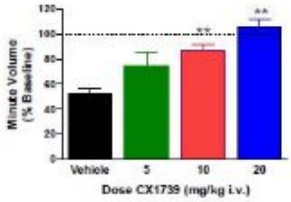
[2] Nora D. Volkow, M.D., and A. Thomas McLellan, Ph.D, National Institute of Drug Abuse, N Engl J Med 2016;374:1253-63.

Translational Approach to Respiratory Disorders

RespireRx Pharmaceuticals Inc



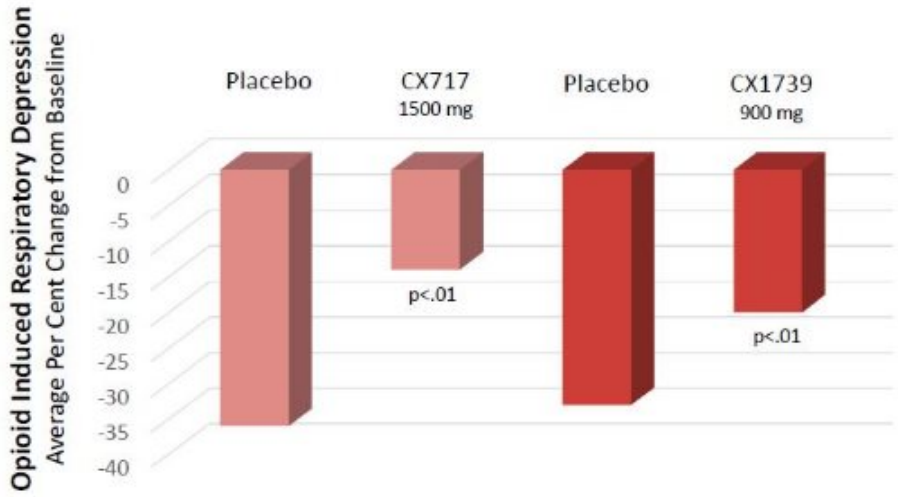




- Brain stem nuclei that regulate breathing contain opiate and AMPA glutamate receptors that inhibit and excite cell activity, respectively
- Ampakines act as positive, allosteric modulators of the AMPA-type glutamate receptor to enhance excitation and prolong and strengthen synaptic transmission
- In animal models, ampakines antagonize opioid-induced respiratory depression

Ampakines Reduce Opioid Induced Respiratory Depression in Phase 2A Clinical Trials

RespireRx Pharmaceuticals Inc

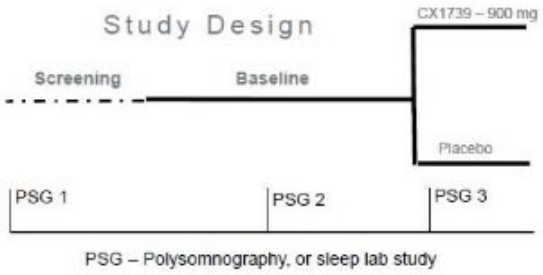


Ampakines reduce opioid induced respiratory depression without altering analgesia

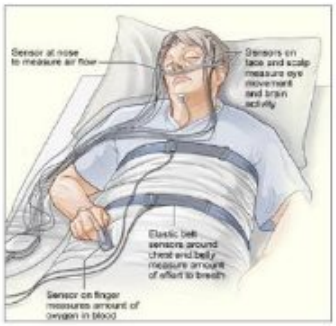
CX1739: Completed Phase 2A in Sleep Apnea – Single Dose

RespireRx Pharmaceuticals Inc

Design	Randomized, double-blind, placebo-controlled study
Population	20 adults with all types of moderate to severe sleep apnea (16 given CX1739; 4 given Placebo)
Dosing	Each subject received either placebo or a single dose of 900mg CX1739 one hour before lights out
Primary Measures	Apnea-Hypopnea measures; Oxygen saturation; Sleep quality, measured by PSG (Apnea: no airflow for >10s; Hypopnea: reduced airflow for >10s)

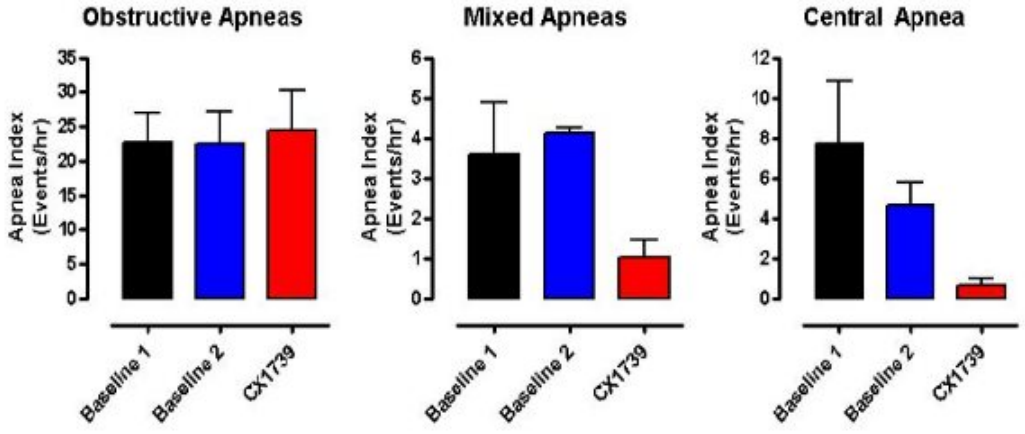


PSG – Polysomnography, or sleep lab study



Patient Selection: CX1739 Was More Effective in Treating Mixed and Central Sleep Apneas

RespireRx Pharmaceuticals Inc



The RespireRx Ampakine™ Pipeline

RespireRx Pharmaceuticals Inc

Compound	Indication	Status	Start Date*	Completion*
CX1739	Opioid-induced Apnea	Phase 2A	2Q2016	✓ 4Q2016
	Opioid Induced Sleep Apnea	Phase 2B	1Q2018	4Q2018
CX717/CX1739	Spinal Cord Injury	Phase 2A	1Q2018	3Q2018
CX717/CX1739	Orphan Diseases: Autism, Pompé	Pre-Clinical to Clinical	Ongoing	Ongoing
CX1942/CX1739	Formulations for Opioid Overdose Rescue in Combination with Naloxone	Pre-clinical to Clinical	4Q2017	Ongoing

*Pending Funding

Ampakine Indications and IP

RespireRx Pharmaceuticals Inc

- **Targeted Indications**
  - CSA in Chronic opioid patients
  - Spinal cord injury
  - Combination formulation with an opioid for treatment of chronic pain

- **Intellectual Property Protection (owned and licensed)**
  - Issued Composition-of-Matter Patents (expire 2028)
  - Method-of-use patents (expire 2030)

Capital Structure and Market Metrics

RespireRx Pharmaceuticals Inc

	Pro Forma at June 30, 2017
Common Stock	2,289,000
Common Stock Equivalents of Convertible Notes	31,000
Common Stock Equivalents of all Options and Warrants Granted (excludes 1,175,000 shares reserved for equity plans)	2,676,000
Total	4,996,000

	Market Metrics at September 6, 2017
Closing price as of September 6, 2017	$1.10
Fully diluted market capitalization (rounded)	$5,496,000

Innovative Medicines for Respiratory Diseases

RespireRx Pharmaceuticals Inc

- **Cannabinoids: Dronabinol**
  - Phase 3 ready for Obstructive Sleep Apnea Syndrome (OSA)
- **Ampakines: CX1739, CX717, CX1942**
  - Three (3) positive, statistically significant Phase 2A trials
  - CNS target engagement and clinical proof of concept for opioid induced respiratory depression (RD) and central sleep apnea
  - Translational research program in spinal cord injury & orphan diseases
- Medicines that address blockbuster markets with unmet needs
- Publicly traded company (OTC QB:RSPI)
- Experienced and accomplished management team

Management Team and Directors

RespireRx Pharmaceuticals Inc

James Manuso, PhD, *President, CEO & Vice Chairman*
- *Biotechnology/pharmaceuticals industry CEO*
- *Formerly served as Chairman and CEO of Astex Pharmaceuticals*
- *Author of over 30 chapters, articles and books on topics including healthcare cost containment and biotechnology company management*

Arnold Lippa, *CSO & Executive Chairman*
- *Founder of DOV Pharmaceuticals and Praxis Pharmaceuticals*
- *Serial life science company entrepreneur*
- *Indirect managing member of Aurora Capital LLC*

Jeff Margolis, *CFO, SVP, Treasurer, Secretary, Director*
- *Founder, President and indirect managing member of Aurora Capital LLC (FINRA, SIPC), life science focused investment bank, 22 years*

Richard Purcell, *Senior VP, R& D*
- *Biopharmaceutical development specialist with consulting experience for financial, venture capital and start-up companies*
- *Formerly, President of CRO*

Katie MacFarlane, *Director*
- *Senior VP, Napo Pharmaceuticals*
- *Owner and Managing Director of SmartPharma, a pharmaceuticals consulting firm*
- *More than 25 years of experience and expertise in marketing, new product planning and commercialization*

James Sapirstein, *Director*
- *CEO of ContraVir Pharmaceuticals*
- *Founder and former CEO of Tobira Therapeutics*

RespireRx Pharmaceuticals Inc

OTC QB: RSPI

James S. Manuso, Ph.D., President & CEO

2017 Rodman & Renshaw Conference
New York, September 12, 2017

Medicines for Respiratory Diseases

RespireRx Pharmaceuticals Inc. to Present at 2017 Rodman & Renshaw Conference

CEO to Review dronabinol, a Phase III-ready medicine for the treatment of Obstructive Sleep Apnea, and Provide Pipeline update

Glen Rock, N.J., September 8, 2017/Globe Newswire – RespireRx Pharmaceuticals Inc. (OTC QB: RSPI) ("RespireRx" or the "Company"), a leader in the development of medicines for the treatment of respiratory disorders, including sleep apnea, opioid-induced respiratory depression, and respiratory insufficiency due to spinal cord injury, announces that the Company's Chief Executive Officer and Vice Chairman of the Board of Directors, James S. Manuso, Ph.D., will present at the 2017 Rodman & Renshaw Conference on Tuesday, September 12, 2017 at 1:45 PM Eastern Time The presentations will be held at the Palace Hotel in New York, September 11-12, 2017.

Dr. Manuso will discuss RespireRx's successfully completed Phase IIB clinical trial of dronabinol in the treatment of obstructive sleep apnea, and will present the results of a Phase IIA trial evaluating the ability of CX-1739 (oral) to antagonize the drug-induced respiratory depression produced by the powerful opioid, remifentanil. He will also provide updated information and clinical development plans for the company's pipeline products.

Dr. Manuso's presentation will be available by live webcast streaming online and will be archived. To access the live audio webcast, go to http://wsw.com/webcast/rrshq27/rspi . A copy of the slide presentation to be presented at the conference will be submitted to the Securities and Exchange Commission in a Current Report on Form 8-K prior to the presentation and will also be available in the investors section of the RespireRx website.

About RespireRx Pharmaceuticals Inc.

RespireRx Pharmaceuticals Inc. is a leader in the development of medicines for respiratory disorders, with a focus on sleep apneas and drug-induced respiratory depression. The Company has licensed and owns patents and patent applications, and holds exclusive licenses, for certain use patents for the use of ampakines for the treatment of disordered breathing. During the first quarter of 2018, the Company plans to meet with FDA to discuss its Phase III clinical trial program to test the safety and efficacy of dronabinol for the treatment of obstructive sleep apnea.

RespireRx's pharmaceutical candidates in development are derived from two platforms, as described below.

The first platform is the class of compounds known as cannabinoids, in particular, dronabinol. Under a license agreement with the University of Illinois, the Company has rights to patents covering the use of cannabinoids for the treatment of sleep-related breathing disorders. In a double-blind, placebo-controlled, dose-ascending Phase IIA clinical study, dronabinol produced a statistically significant reduction in the Apnea-Hypopnea Index, the primary therapeutic end-point, and was observed to be safe and well-tolerated in a group of patients with Obstructive Sleep Apnea (OSA). These results were confirmed by a Phase IIB trial at the University of Illinois at Chicago and Northwestern University in which dronabinol proved to be safe and efficacious for the treatment of OSA in a six week, double-blind, placebo-controlled clinical trial in 56 patients with OSA. This study, which the University of Illinois completed during the third quarter of 2016, was fully funded by the National Heart, Lung and Blood Institute of the National Institutes of Health.

The second platform of medicines being developed by RespireRx is a class of proprietary compounds known as ampakines that act to enhance the actions of the excitatory neurotransmitter glutamate at AMPA glutamate receptor sites in the brain. Several ampakines are being developed by the Company for the treatment of a variety of breathing disorders. In a recently completed Phase IIA clinical trial, CX-1739, one of our lead clinical compounds, was shown to reduce the respiratory depression produced by remifentanil, a potent opioid, without altering its analgesic effects. In a pilot study of sleep apnea, CX1739 has demonstrated early promise in the treatment of central sleep and mixed apneas. The Company plans to initiate a clinical trial in spinal cord injury patients with respiratory insufficiency based on positive pre-clinical findings from studies performed by our collaborators at the University of Florida.

The Company is also collaborating with academic researchers on translational research programs to develop the ampakines for the treatment of orphan diseases, including Pompé Disease, Fragile-X Syndrome, and perinatal respiratory distress, where the ampakines have shown effectiveness in animal models.

Additional information about the Company and the matters discussed herein can be obtained on the Company's web-site at www.RespireRx.com or in the Company's filings with the U.S. Securities and Exchange Commission on EDGAR at www.sec.gov.

Clinical Trial Plans for 2017 - Phase III Clinical Trial plans for Development of dronabinol

As reported in a press release and on Form 8-K on December 23, 2016, RespireRx announced positive results of the PACE (Pharmacotherapy of Apnea by Cannabimimetic Enhancement) trial conducted by Drs. David Carley and Phyllis Zee at the University of Illinois at Chicago and Northwestern University, respectively. The PACE trial, a Phase 2B study of dronabinol for the treatment of obstructive sleep apnea ("OSA"), clearly demonstrated that dronabinol significantly improved the primary outcome measures of Apnea Hypopnea Index ("AHI"), daytime sleepiness as measured by the Epworth Sleepiness Scale ("ESS") and overall patient satisfaction as measured by the Treatment Satisfaction Questionnaire for Medications ("TSQM"). Based on these results, RespireRx will engage with FDA in Q1/2018 to agree upon the next steps in connection with the initiation of a pivotal Phase III clinical trial program testing the safety and efficacy of dronabinol in the treatment of obstructive sleep apnea.

Clinical Trial Plans for 2017 - Phase IIB Trial of CX1739 in Central Sleep Apnea

As previously reported, an acute dose of CX1739 improved respiratory function of subjects in a phase IIA trial of opioid induced respiratory depression using a clinical model of chronic opioid use. As a follow-up, RespireRx is planning a Phase II multiple dose study of CX1739 in subjects who are on chronic opioid therapy. Among patients on chronic opioid therapy for at least 6 months, the presence of apnea and hypopnea has been diagnosed in 50% - 75% of patients screened. Initially, these symptoms usually appear during sleep and are considered, by the National Institutes of Health (NIH) and the National Institute of Drug Addiction (NIDA), to be significant risk factors for opioid addiction and overdose. Therefore, the Phase 2 study is planned to evaluate the ability of CX1739 treatment to reduce apnea and hypopnea associated with central sleep apnea.

Comments by the Company's President and Chief Executive Officer

Dr. James S. Manuso, commented, "We look forward to advancing the many initiatives RespireRx is undertaking throughout the course of 2017. Now that the Company is Phase III-ready with respect to the final clinical and regulatory development of dronabinol for the treatment of obstructive sleep apnea, commercialization and potential partnering plans have been initiated. With dronabinol's Phase III trial on the horizon, along with the Company's Phase II ampakines in development, there are numerous strategic and operational milestones on the calendar. In 2017 we will continue to focus on the clinical and regulatory development of the Company's two proprietary platforms for addressing unmet needs in the sleep apnea and opioid-induced respiratory depression markets. In addition, we will continue to support the scientific research and pre-clinical development upon which RespireRx is based. I look forward to reporting to you our progress in the months ahead."

Cautionary Note Regarding Forward-Looking Statements:

This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and the Company intends that such forward-looking statements be subject to the safe harbor created thereby. These might include statements regarding the Company's financial position, business strategy and other plans and objectives for future operations, and assumptions and predictions about research and development efforts, including, but not limited to, preclinical and clinical research design, execution, timing, costs and results, future product demand, supply, manufacturing, costs, marketing and pricing factors are all forward-looking statements.

In some cases, forward-looking statements may be identified by words including "anticipates," "believes," "intends," "estimates," "expects," "plans," and similar expressions include, but are not limited to, statements regarding (i) future research plans, expenditures and results, (ii) potential collaborative arrangements, (iii) the potential utility of the Company's proposed products, and (iv) the need for, and availability of, additional financing.

The forward-looking statements included herein are based on current expectations that involve a number of risks and uncertainties. These forward-looking statements are based on assumptions regarding the Company's business and technology, which involve judgments with respect to, among other things, future scientific, economic and competitive conditions, and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the Company's control. Although the Company believes that the assumptions underlying the forward-looking statements are reasonable, actual results may differ materially from those set forth in the forward-looking statements. In light of the significant uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by the Company or any other person that the Company's objectives or plans will be achieved.

Factors that could cause or contribute to such differences include, but are not limited to, regulatory policies or changes thereto, available cash, research and development results, competition from other similar businesses, and market and general economic factors. This discussion should be read in conjunction with the condensed consolidated financial statements (unaudited) and notes thereto included in Item 1 of the Company's current Quarterly Report on Form 10-Q as of and for the periods ending June 30, 2017 and the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, including the section entitled "Item 1A. Risk Factors." The Company does not intend to update or revise any forward-looking statements to reflect new information, future events or otherwise.

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