

**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): February 23, 2016

TONIX PHARMACEUTICALS HOLDING CORP.

(Exact name of registrant as specified in its charter)

Nevada
(State or Other Jurisdiction
of Incorporation)

001-36019
(Commission
File Number)

26-1434750
(IRS Employer
Identification No.)

509 Madison Avenue, Suite 306, New York, New York 10022
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (212) 980-9155

Copy of correspondence to:

Marc J. Ross, Esq.
James M. Turner, Esq.
Sichenzia Ross Friedman Ference LLP
61 Broadway
New York, New York 10006
Tel: (212) 930-9700 Fax: (212) 930-9725

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 (see General Instruction A.2. below):

- 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))
-

Item 7.01 Regulation FD Disclosure.

Tonix Pharmaceuticals Holding Corp. (the "Company") intends to utilize an updated investor presentation to conduct meetings with investors, stockholders and analysts and at investor conferences, and which the Company intends to place on its website, which may contain non-public information. A copy of the presentation is filed as Exhibit 99.01.

The information contained in Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.01, is furnished pursuant to, and shall not be deemed to be "filed" for the purposes of, Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section. The information contained in Item 7.01 of this Current Report shall not be incorporated by reference into any registration statement or any other document filed pursuant to the Securities Act of 1933, as amended, except as otherwise expressly stated in such filing. By filing this Current Report on Form 8-K and furnishing the information contained in this Item 7.01, including Exhibit 99.01, the Company makes no admission as to the materiality of any such information that it is furnishing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

99.01 Corporate Presentation by the Company for February 2016*

* Furnished herewith.

SIGNATURE

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

TONIX PHARMACEUTICALS HOLDING CORP.

Date: February 23, 2016

By: /s/ JESSICA MORRIS
Jessica Morris
Acting Chief Financial Officer



NASDAQ: TNXP

Investor Presentation

February 2016

Version: P0007-02-22-16

© 2016 Tonix Pharmaceuticals Holding Corp.

Cautionary note on forward-looking statements

2

Certain statements in this presentation regarding strategic plans, expectations and objectives for future operations or results are "forward-looking statements" as defined by the Private Securities Litigation Reform Act of 1995. These statements may be identified by the use of forward-looking words such as "anticipate," "believe," "forecast," "estimate" and "intend," among others. These forward-looking statements are based on Tonix's current expectations and actual results could differ materially. There are a number of factors that could cause actual events to differ materially from those indicated by such forward-looking statements. These factors include, but are not limited to, substantial competition; our possible need for additional financing; uncertainties of patent protection and litigation; uncertainties of government or third party payor reimbursement; limited research and development efforts and dependence upon third parties; and risks related to failure to obtain U.S. Food and Drug Administration clearances or approvals and noncompliance with its regulations. As with any pharmaceutical under development, there are significant risks in the development, regulatory approval and commercialization of new products. The forward-looking statements in this presentation are made as of the date of this presentation, even if subsequently made available by the Company on its website or otherwise. Tonix does not undertake an obligation to update or revise any forward-looking statement, except as required by law. Investors should read the risk factors set forth in the Annual Report on Form 10-K for the year ended December 31, 2014 and Quarterly Report on Form 10-Q for the period ended September 30, 2015, as filed with the Securities and Exchange Commission (the "SEC") on February 27, 2015 and November 6, 2015, respectively, and future periodic reports filed with the SEC on or after the date hereof. All of the Company's forward-looking statements are expressly qualified by all such risk factors and other cautionary statements.

Developing innovative medicines for large and growing markets

3

- **Targeting a common pain condition and a serious psychiatric disorder**
 - One clinical-stage proprietary candidate targeting two indications
 - Differentiated products with potential for sustainable competitive advantages
- **2016 to reveal results from two clinical trials**
 - Fibromyalgia – Phase 3 to report in 3Q
 - Post-traumatic stress disorder – Phase 2 to report in 2Q
- **All intellectual property owned by Tonix**

Pipeline led by TNX-102 SL for fibromyalgia

Candidate	Indication	Preclinical	Phase 1	Phase 2	Phase 3	NDA	Market	Near-term Catalyst	
TNX-102 SL (Tonmya™*)	Fibromyalgia								Top line data 3Q 2016
TNX-102 SL	Post-Traumatic Stress Disorder								Top line data 2Q 2016

* Tonmya™ has been conditionally accepted by the FDA as the proposed tradename of TNX-102 SL for fibromyalgia.

*NDA = New Drug Application; FDA = U.S. Food and Drug Administration.
 TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.*

© Copyright 2016 Tonix Pharmaceuticals



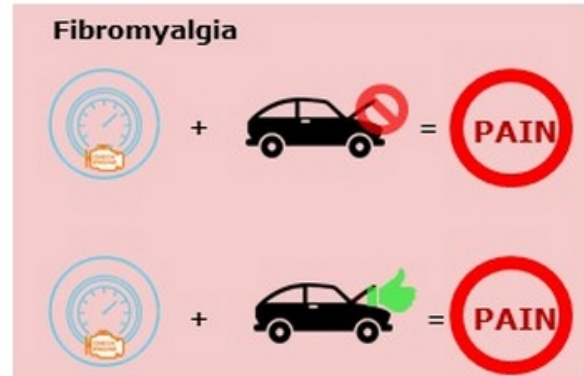
Concept: Fibromyalgia is inappropriate central pain signaling in the absence of peripheral injury

5

Pain is a sensor system in the brain, like a check engine light on a car's dashboard



The pain alarm is turned on in fibromyalgia even though there's no peripheral tissue injury



= engine working normally
no cause for alarm

= engine not working
alarm justified

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Fibromyalgia is a chronic, debilitating disorder that imposes a significant societal and economic burden

6

- **Fibromyalgia is considered neurobiological disorder characterized by¹:**
 - Chronic widespread pain
 - Nonrestorative sleep
 - Fatigue
 - Diminished cognition
- **Believed to result from amplified sensory and pain signaling in central nervous system¹**
- **Causes significant impairment in all areas of life²**
 - Lower levels of health-related quality of life – reduced daily functioning
 - Interference with work (loss of productivity, disability)
- **Inflicts substantial strain on the healthcare system**
 - Average patient has 20 physician office visits per year³
 - Annual direct medical costs are twice those for non-fibromyalgia individuals⁴

¹Phillips K & Clauw DJ, *Best Pract Res Clin Rheumatol* 2011;25:141.

²Schaefer et al., *Pain Pract*, 2015, May 16.

³Robinson et al, *Pain Medicine* 2013;14:1400.

⁴White et al, *J Occupational Environ Med* 2008;50:13.

Fibromyalgia is a prevalent disorder but remains underdiagnosed

7



Estimated that >22 million prescriptions are issued for the treatment of fibromyalgia (on- and off-label usage) each year^{2,4}

- **1.1% diagnosis rate = 2.7 million U.S. adults¹**
 - Suggests under-diagnosis
- **Approximately 2.3 million U.S. adults receive treatment²**
- **Approved drugs achieved 2014 U.S. sales of \$1.2 billion³**
 - Represent about 5.6 million prescriptions⁴

¹Lawrence et al, *Arthritis Rheum* 2008;58:26; Vincent et al, *Arthritis Care Res* 2013;65:786; Jones et al, *Arthritis Rheum* 2015;67:568.

²Robinson RL et al, *Pain Med* 2012;13:1366.

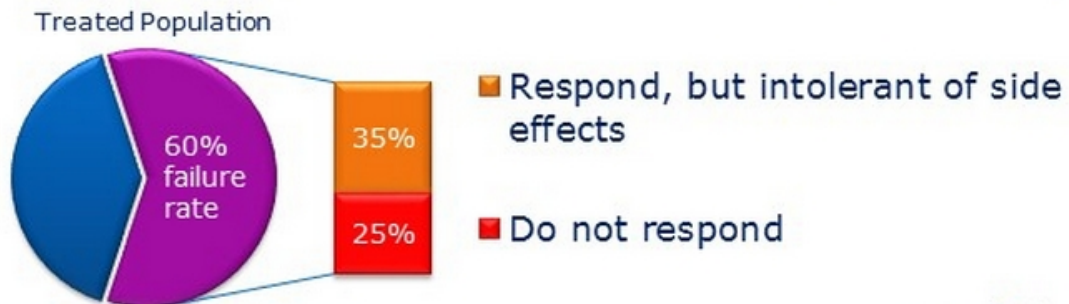
³Product sales derived from IMS MIDAS; IMS NDTI used to factor usage for fibromyalgia; data accessed April 2015.

⁴Independent study conducted by IMS Consulting Group, April 2015 using IMS MIDAS (ex-manufacturing price), factored for fibromyalgia based on IMS National Disease and Therapeutic Index (NDTI).

Fewer than half of those treated for fibromyalgia receive sustained benefit from the three FDA-approved drugs

8

- The treatment objective is to restore functionality and quality of life by broadly improving symptoms while avoiding significant side effects
- The majority fail therapy due to **lack of a response** or **poor tolerability**¹



¹Market research by Frost & Sullivan, commissioned by Tonix (2011).

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Large need for new fibromyalgia therapies that provide broad symptom improvement with better tolerability

9

- **Currently-approved medications may have side effects that limit long-term use¹**
 - Many patients skip doses or discontinue altogether within months of treatment initiation
- **Medication-related side effects may be similar to fibromyalgia symptoms**
- **High rates of discontinuation, switching and augmentation**
 - Attempt to treat multiple symptoms and/or avoid intolerable side effects
 - Average of 2-3 medications used simultaneously²
 - The typical patient has tried six different medications³
- **Substantial off-label use of narcotic painkillers and prescription sleep aids³**

¹Nuesch et al, *Ann Rheum Dis* 2013;72:955-62.

²Robinson RL et al, *Pain Medicine* 2012;13:1366.

³"Patient Trends: Fibromyalgia", *Decision Resources*, 2011.

Tonix is developing TNX-102 SL for fibromyalgia

10

- **Advanced sublingual tablet containing low-dose cyclobenzaprine (CBP)**
 - Designed for daily bedtime administration with no titration
 - Efficient transmucosal absorption
 - Avoidance of first-pass metabolism reduces formation of long-lived metabolite
- **TNX-102 SL's pharmacologic action is believed to improve sleep quality**
 - Non-restorative sleep is a common clinical and diagnostic feature of fibromyalgia¹
 - Evolving understanding of the role of sleep in pain control and fibromyalgia development²
 - TNX-102 SL targets receptors believed to play key roles in sleep physiology
- **Phase 2b "BESTFIT" study was successfully completed in 3Q14**
- **Top line data from ongoing Phase 3 "AFFIRM" study expected to report in 3Q16**

¹Swick TJ, *Ther Adv Musculoskel Dis* 2011;3:167-178.

²Choy EHS, *Nat Rev Rheumatol* adv online pub 28 April 2015.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

Phase 2b “BESTFIT” study of TNX-102 SL in fibromyalgia

11

- **BESTFIT = BEdtime Sublingual TNX-102 SL as Fibromyalgia Intervention Therapy**
 - Randomized, double-blind, placebo-controlled trial
 - 2010 American College of Rheumatology diagnostic criteria for fibromyalgia
 - 205 participants randomized 1:1 at 17 U.S. sites
 - Sublingual tablet of TNX-102 SL 2.8 mg or placebo daily at bedtime for 12 weeks
 - Evaluated measures of pain, sleep quality, and other assessments of fibromyalgia

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

BESTFIT results on key clinical endpoints

12

Category	Endpoint – week 12 ¹	p value
Pain Relief	30% responder analysis ²	0.033
Sleep Quality	PROMIS Sleep Disturbance	0.005
Overall response to therapy	PGIC	0.025
Assessment of disease impact	FIQ-R Total score	0.014

p < 0.05 → statistically significant

BESTFIT pre-specified primary endpoint:
change in week 12 mean pain score
(p=0.172)

- PROMIS = Patient-Reported Outcomes Measurement Information System
- PGIC = Patient Global Impression of Change
- FIQ-R = Fibromyalgia Impact Questionnaire - Revised

¹Intent-to-treat analysis, N=205 (TNX-102 SL N=103, placebo N=102).

²FDA-accepted primary endpoint in current Phase 3 AFFIRM study.

Source: Phase 2b BESTFIT study data.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

TNX-102 SL safety and tolerability profile in the BESTFIT study

13

- **No serious adverse events (SAE) reported with TNX-102 SL**
- **Systemic adverse events reported by at least 3% of the total BESTFIT population**

	TNX 102 SL (N=103)	Placebo (N=101)
Somnolence	1.9	6.9
Dry Mouth	3.9	4.0
Back Pain	4.9	3.0

- **Most frequent local adverse events were administration site reactions**
 - Previously reported in Phase 1 studies; no detectable bias on efficacy results
 - Transient tongue numbness (44% TNX=102 SL vs. 2% placebo)
 - Abnormal taste (8% TNX- 102 SL vs. 0% placebo)
- **Trial completion rates of 86% with TNX-102 SL vs. 83% with placebo**

Source: Phase 2b BESTFIT study data.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

TNX-102 SL in Phase 3 clinical development for fibromyalgia

14

- Phase 3 AFFIRM Study is underway

TNX-102 SL once-daily at bedtime
2.8 mg N = 250

Placebo once-daily at bedtime
N = 250

12 weeks → open-label extension

Top line data expected 3Q 2016

- Randomized, double-blind, placebo-controlled study in fibromyalgia
 - N=500; approximately 35 U.S. clinical sites
 - Primary efficacy endpoint:**
 - Difference in 30% pain responder analysis at Week 12 between TNX-102 SL and placebo
- Second Phase 3 Study ("REAFFIRM") expected to begin in 2Q 2016
 - Expected to be similar to AFFIRM in design and size

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

TNX-102 SL in Phase 2 development for post-traumatic stress disorder (PTSD)

15

Candidate	Indication	Preclinical	Phase 1	Phase 2	Phase 3	NDA	Market	Near-term Catalyst
TNX-102 SL (Tonmya™*)	Fibromyalgia							Top line data 3Q 2016
TNX-102 SL	Post-Traumatic Stress Disorder							Top line data 2Q 2016

* Tonmya™ has been conditionally accepted by the FDA as the proposed tradename of TNX-102 SL for fibromyalgia.

NDA = New Drug Application; FDA = U.S. Food and Drug Administration.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.



© Copyright 2016 Tonix Pharmaceuticals

PTSD is a chronic stress disorder triggered by a traumatic event

16

- **PTSD is characterized by:**
 - re-experiencing the triggering event
 - negative alterations in mood/cognition
 - situation/stimulus avoidance
 - hypervigilance (anxiety, difficulty sleeping)
- **Considered a stress response, but prolonged and does not resolve with time**
 - 20% of women and 8% of men who experience significant trauma develop PTSD¹
- **Associated with significant life disruption**
 - Social isolation, inability to maintain employment, loss of independent living
 - Unpredictable acts of violence, suicidal thoughts

¹ Kessler et al, *Arch Gen Psychiatry* 1995;52:1048.

PTSD is a prevalent problem for both civilians and the military

17



- **~70% are considered to have moderate to severe symptoms**
- **Of those diagnosed, ~50% utilize professional healthcare (psycho/pharmacotherapy)²**
- **Higher prevalence in military population**
 - 20% of veterans from recent conflicts will have potential/provisional PTSD³
 - ~638,000 veterans with PTSD in the VA health system (2012)⁴
 - Majority are male
 - Alcohol and substance abuse are common

¹Kessler RC et al, *Arch Gen Psychiatry* 2013;62:617; U.S. Census Bureau, 2013 Projection.

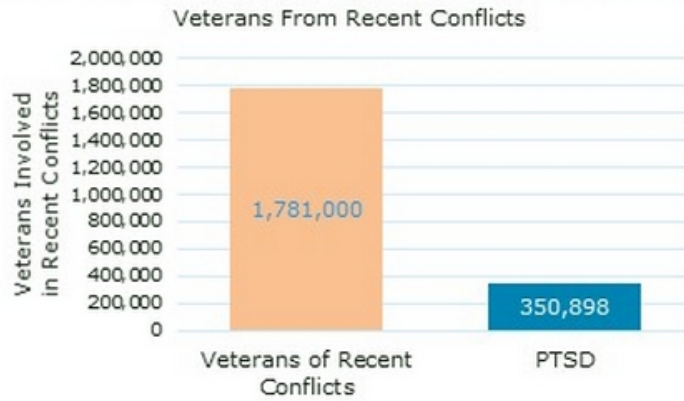
²Wang et al, *Arch Gen Psychiatry* 2005;62:629.

³Report on VA Facility Specific Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) Veterans Diagnosed with Potential or Provisional PTSD.

⁴Bowe et al, *J Dual Diagnosis* 2015;11:22.

PTSD veteran population: recent conflicts only

Veteran Administration (VA) records indicate that 20% of veterans from recent conflicts will have potential or provisional PTSD



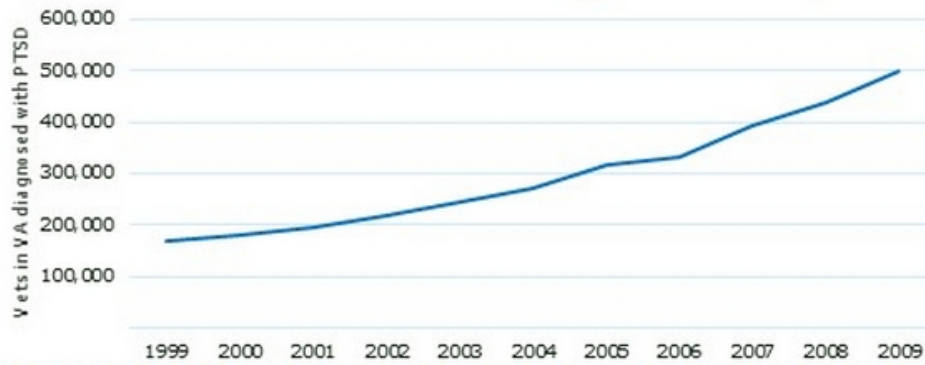
Source: Report on VA Facility Specific Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) Veterans Diagnosed with Potential or Provisional PTSD. Cumulative from 1st Qtr FY 2002 through Qtr FY 2014 (October 1, 2001 – March 31, 2014)



PTSD veteran population: all conflicts

The number of veterans in the VA system and diagnosed with PTSD has been rising¹

- Does not include veterans with PTSD not treated or diagnosed in the VA system



As of 2012, the number of veterans within VA diagnosed with PTSD reach 638,451²

¹Bernardy et al., *J Clin Psychiatry*, 2012, 73:297-303

²Bowe et al., *J Dual Diagnosis*, 2014, 11:22-32

Significant gap in current therapeutic landscape for PTSD

20

- **Medicines approved for PTSD often provide inadequate and/or inconsistent benefit**
 - Limited to two SSRI antidepressants, both of which carry suicidality warnings
 - U.S. Institute of Medicine (IOM) concluded that evidence of treatment effect is low¹
 - Lack of efficacy evidence in those with a history of combat-related trauma²
- **Sleep dysfunction in PTSD is resistant to currently-approved options**
 - 95%+ report insomnia, 83% report recurrent dreams of the trauma³
 - Correlated with disease severity, depression, substance abuse and suicide⁴
 - Drugs approved for insomnia have been shown to not improve PTSD sleep dysfunction
- **Off-label use of anxiolytics, sedative-hypnotics, and antipsychotics is common⁵**
 - Limited evidence of effectiveness; may be harmful
 - May interfere with other treatments such as cognitive behavioral therapy (CBT)

SSRI = selective serotonin reuptake inhibitor.

¹ Marshall et al, *Am J Psychiatry* 2001;158:1982.

² Jonathan Davidson, *personal communications*, 2014.

³ Green B. *Post-traumatic stress disorder: Symptom profiles in men and women. Curr Med Res Opin* 2003;19:200-4.

⁴ Germain et al, *J Anxiety Disord* 2005;19:233; Krakow et al, *J Nerv Ment Dis* 2002;190:442.

⁵ Bernardy et al., *J Clin Psychiatry*, 2012, 73:297-303.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Targeting sleep quality is a novel mechanism of action in PTSD therapy

21

- **PTSD patients complain of sleep disturbance as a core symptom¹**
 - Distressing dreams (nightmares) are part of "re-experiencing"
 - Avoidance can be of bed/sleep due to fear of nightmares
 - Restless sleep is part of the "hyper-arousal" cluster of PTSD diagnostic criteria
- **Sleep disturbance after trauma is linked to onset of PTSD²**
- **Sleep disturbance also correlates with depression, substance abuse and suicidal behaviors in PTSD³**
- **TNX-102 SL is a tricyclic molecule that potently targets three molecular mechanisms⁴, each of which is associated with treating aspects of disturbed sleep, enhancing sleep quality**
 - Blocks the 5-HT_{2A} receptor (like trazodone)
 - Blocks the α_1 adrenergic receptor (like prazosin)
 - Blocks the H₁ receptor (like low-dose doxepin)

¹ American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, 2013.

² Koren et al, *AJP* 159:855-857, 2002; Mellman et al, *AJP* 159:1969-1701, 2002.

³ Germain, *AJP* 170:372-382, 2013; McHugh et al, *J Traumatic Stress* 27:82-89, 2014 Betts et al, *Journal of Anxiety Disorders* 27:735-41, 2013.

⁴ Daugherty et al, *Society of Biological Psychiatry 70th Annual Scientific Convention*, May 14-16, 2015 Toronto, Ontario, Canada.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

Tonix's AtEase study in military-related PTSD: primary endpoint and power considerations

22

- **Primary endpoint is the change from baseline of the Clinician Administered PTSD Scale for DSM-5 (CAPS-5)**
 - Raters are trained, certified, and monitored for reliability throughout the study
- **Powered at $\geq 80\%$ to detect an effect size of 0.5 (Cohen's *d*)**
 - Translates to detection of difference of approximately 10 points (8.5-11.5) at group level between TNX-102 SL 2.8 mg and placebo for the reduction in total CAPS-5 score
 - Approximately 66 completers needed in each of the TNX-102 SL and placebo groups
 - A 10-point difference between treatment groups is approximately equivalent to a 17-point difference on CAPS-4 for DSM-IV

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Limitations of current FDA-approved pharmacotherapies for PTSD

23

- **Britain's National Institute for Clinical Excellence (NICE) National Clinical Practice Guideline for management of PTSD reported an effect size in paroxetine trials of 0.42 and for sertraline trials, the effect size was 0.26¹**
 - *A priori*, NICE had set a threshold of 0.5 as an effect size that would indicate a clinically meaningful effect on PTSD
 - NICE stated that neither of these two FDA-approved therapies had conclusive evidence to determine if there was a clinically important difference from placebo
- **Limited treatment response to SSRIs in Males and US Military**
 - In a review of sertraline registration trials, no effect on PTSD demonstrated for male subgroups in an FDA-conducted post-hoc analysis
 - None of the four double-blind placebo-controlled trials of SSRIs in US military veterans demonstrated any evidence that SSRIs were superior to placebo²

¹ National Clinical Practice Guideline No. 26, National Institute for Clinical Excellence, 2005.

² Davidson J, *Journal of Psychopharmacology*, 2015.

TNX-102 SL's potential as a treatment for PTSD is supported by clinical evidence and pharmacology

24

- **TNX-102 SL is active on receptor sites believed to have treatment potential for sleep problems in PTSD**
 - Targeted receptors include 5-HT_{2a}, alpha-1 adrenergic, and histamine-1 receptors
- **Efficacy of "tricyclic" drug class in PTSD is supported by clinical data¹**
 - Oral tricyclics have side effects that limited their use
- **Improvements observed in BESTFIT study relate to PTSD core symptoms²**

Outcome Measure at Week 12 in BESTFIT	p value
PROMIS Sleep Disturbance	0.005
FIQ-R Anxiety Item	0.015
FIQ-R Sensitivity Item	0.017

p < 0.05 → statistically significant

¹ Davidson J, *J Psychopharm* 2015;29;264.

² Phase 2b BESTFIT study data.

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

Phase 2 "AtEase" trial of TNX-102 SL in PTSD is fully enrolled

25

TNX-102 SL at bedtime once-daily

2.8 mg

N ~ 90

TNX-102 SL at bedtime once-daily

5.6 mg

N ~ 90

Placebo at bedtime once-daily

N ~ 45

- Randomized, double-blind, placebo-controlled trial in military-related PTSD
- Randomized >240; approximately 25 U.S. clinical sites
- **Primary efficacy endpoint:**
 - Difference in Clinician-Administered PTSD Scale (CAPS) score between TNX-102 SL 2.8 mg and placebo at 12 weeks

12 weeks →open-label extension

Top line data
expected 2Q 2016

TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Wholly-owned by Tonix with no obligations to others

TNX-102 SL

Fibromyalgia, PTSD

- **Composition-of-matter (eutectic)**
 - Patents filed
 - Protection expected to 2034
- **Pharmacokinetics (PK)**
 - Patents filed
 - Protection expected to 2033
- **Method-of-use**
 - Fibromyalgia: patents issued, 2020 expiry
 - PTSD: patents filed

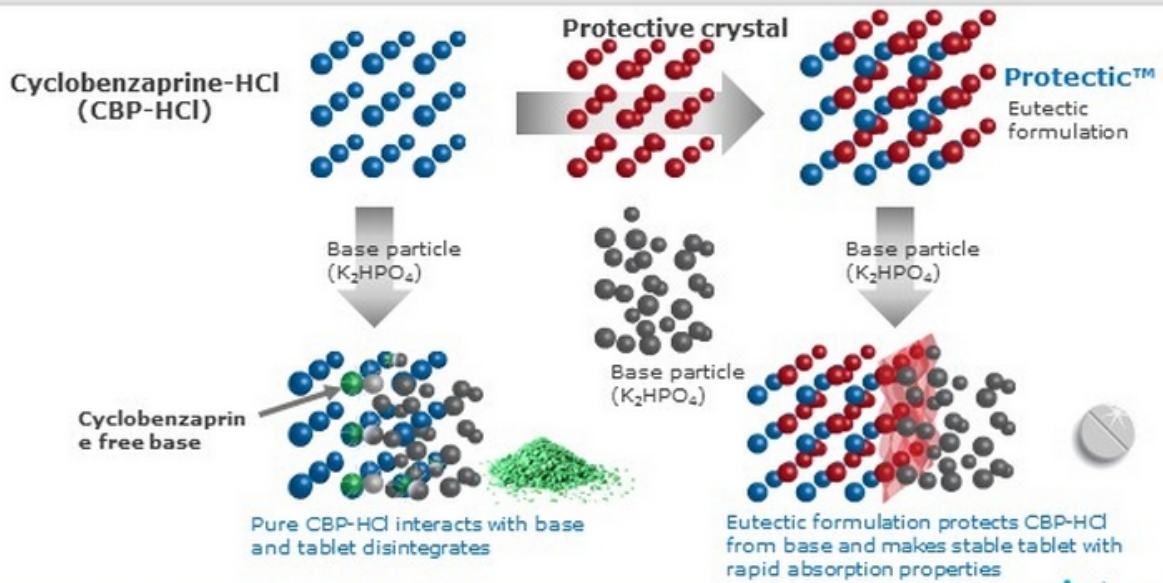
TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Proprietary cyclobenzaprine hydrochloride eutectic mixture stabilizes tablet formulation¹

27



US Patent applications 14/214,433 and 14/776,624 - Eutectic Formulations

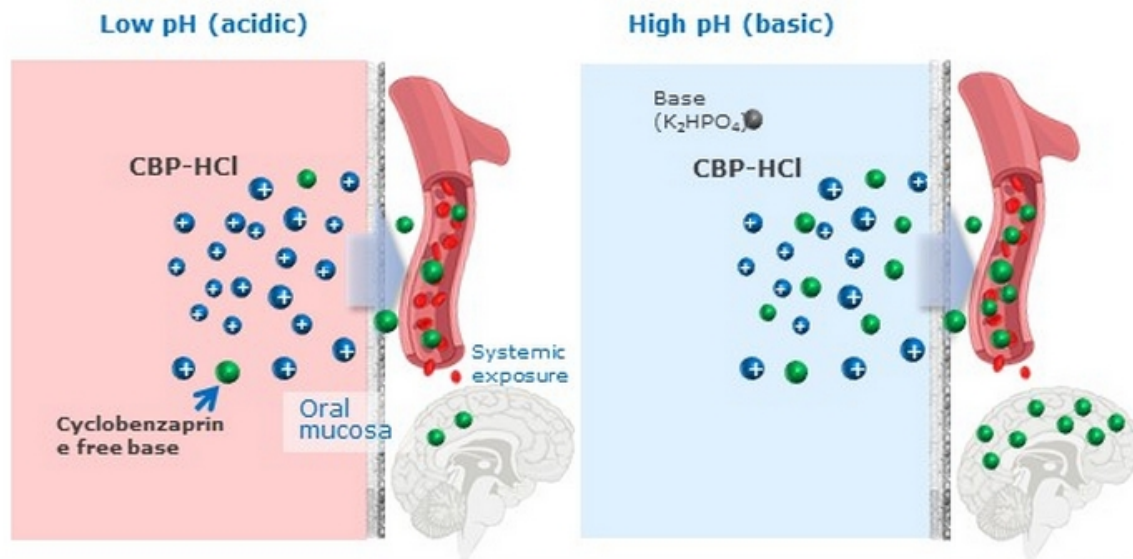
© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Formulation with base increases systemic absorption of sublingual cyclobenzaprine¹

Concentration gradient increases diffusion of free base across oral mucosa (Le Chatelier's Principle)

28



US Patent applications 13/918,692, 14/214,433 and 14/776,624 - Eutectic Formulations

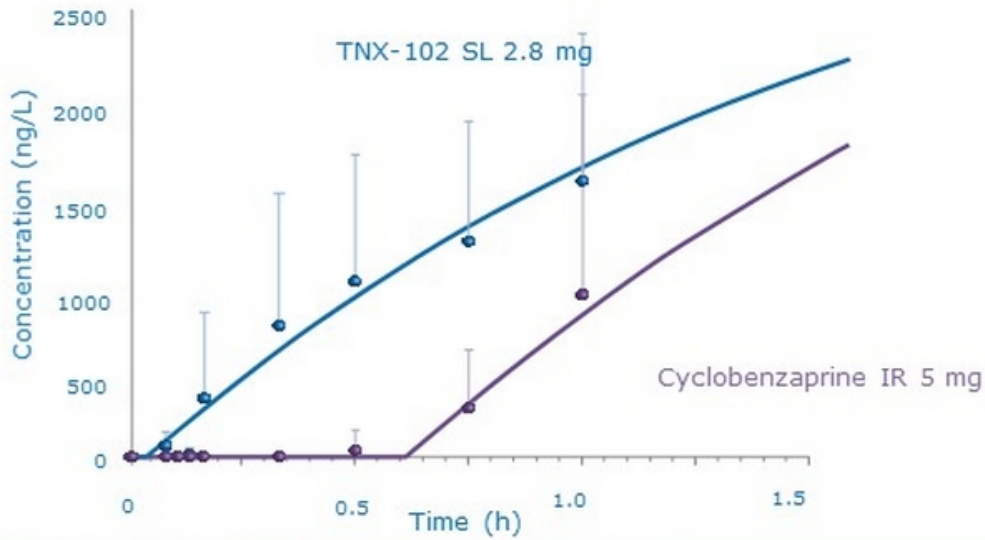
© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Cyclobenzaprine is detected in plasma within minutes following sublingual TNX-102 SL

Plasma Concentration Versus Time of TNX-102 SL Compared to Cyclobenzaprine IR

29



Source: US Patent applications 13/918,692 - Transmucosal absorption
TNX-102 SL (cyclobenzaprine HCl sublingual tablets, 2.8 mg) is an Investigational New Drug
and is not approved for any indication.

© Copyright 2016 Tonix Pharmaceuticals

TONIX
PHARMACEUTICALS

Financial overview

30

NASDAQ: TNXP

Cash, cash equivalents, and marketable securities reported at September 30, 2015 \$ 55.0 million

Cash used in operations in 2015 through September 30 \$ 30.6 million

Shares outstanding (February 22, 2016) 18.8 million

Management team

31

Seth Lederman, MD
President & CEO



Bruce Daugherty, PhD, MBA
Chief Scientific Officer



Gregory Sullivan, MD
Chief Medical Officer



Jessica Edgar Morris
Acting CFO, Chief Administrative Officer



Ronald Notvest, PhD
SVP, Commercial Planning & Development



Board of directors

32

Seth Lederman, MD

Chairman

Ernest Mario, PhD

ALZA, Glaxo, Reliant Pharma

Stuart Davidson

Labrador Ventures, Alkermes, Combion

Charles Mather

BTIG, Janney, Jefferies, Cowen, Smith Barney

Patrick Grace

Apollo Philanthropy, WR Grace, Chemed

John Rhodes

NYSERDA, NRDC, BoozAllen Hamilton

Donald Landry, MD, PhD

Chair of Medicine, Columbia University

Samuel Saks, MD

Jazz Pharma, ALZA, Johnson & Johnson

Milestones – recent and upcoming

33

TNX-102 SL – Fibromyalgia

- ✓ **May 2015** **Began Phase 3 AFFIRM study**
- ✓ **November 2015** **Presented additional data from Phase 2b BESTFIT study at ACR Meeting**
- ☐ **3Q 2016** **Report top-line results from AFFIRM study**

TNX-102 SL – Post-Traumatic Stress Disorder

- ✓ **December 2015** **Entered into CRADA with USAMMDA**
- ✓ **December 2015** **Reported completion of enrollment in Phase 2 AtEase study**
- ☐ **2Q 2016** **Report top-line results from AtEase study**



NASDAQ: TNXP

509 Madison Avenue
New York, NY 10022
(212) 980-9155

www.tonixpharma.com