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): May 22, 2014

TONIX PHARMACEUTICALS HOLDING CORP.

(Exact name of registrant as specified in its charter)

Nevada	**001-36019**	**26-1434750**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(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:

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New York, New York 10006
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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 May 2014*

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* Furnished herewith.

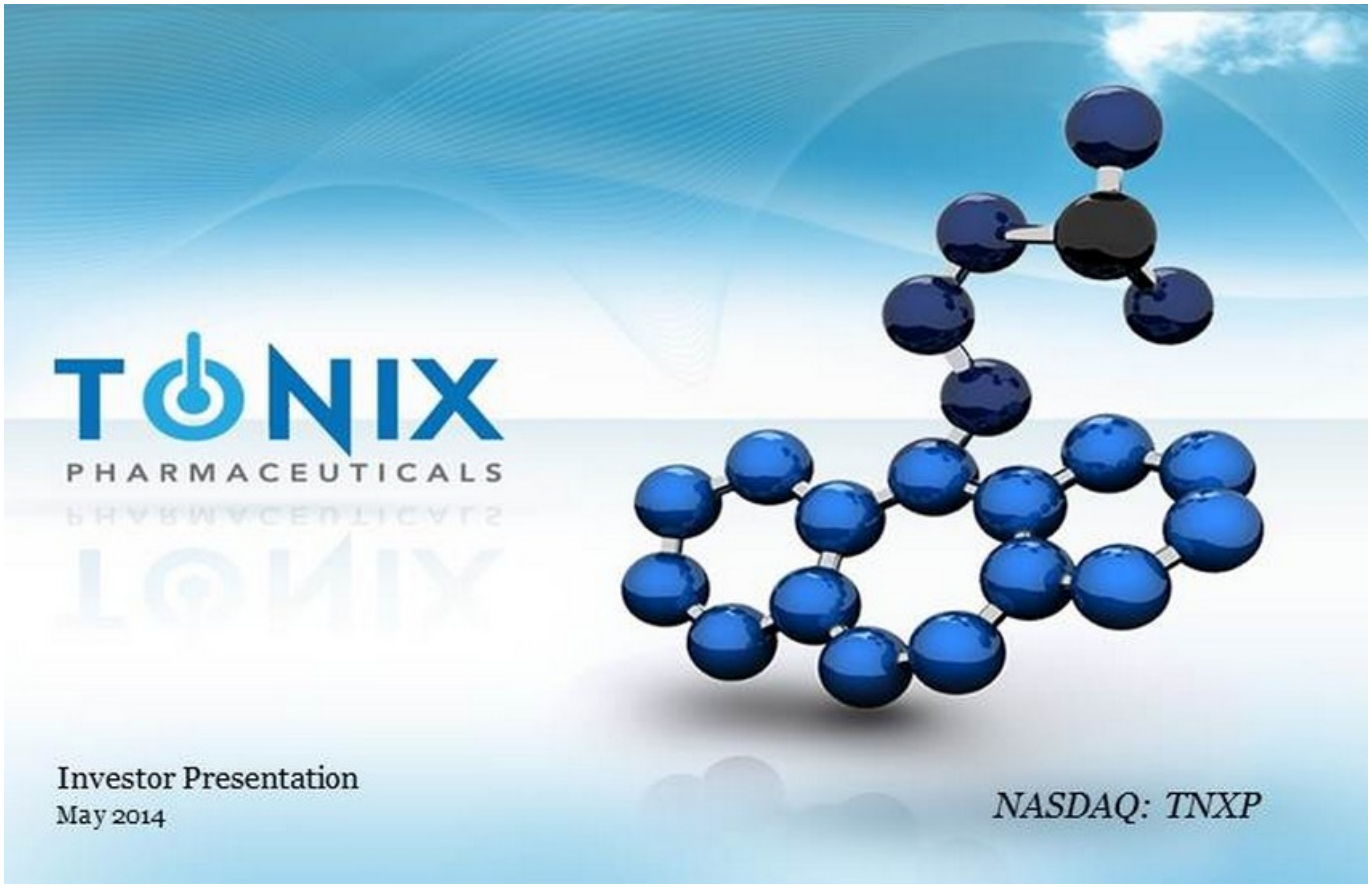
SIGNATURE

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: May 22, 2014

By: */s/ LELAND GERSHELL*
Leland Gershell
Chief Financial Officer


TONIX
PHARMACEUTICALS
Investor Presentation
May 2014
NASDAQ: TNXP

Safe harbor statement

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 ability to continue as a going concern; our need for additional financing; uncertainties of patent protection and litigation; uncertainties of government or third party payer reimbursement; limited sales and marketing 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 amended Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the Securities and Exchange Commission (the "SEC") on March 28, 2014 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.

Investment thesis

High impact prescription drug candidates for common and complex disorders
- First-in-class medicines
- New treatment paradigms
- Large unmet medical needs

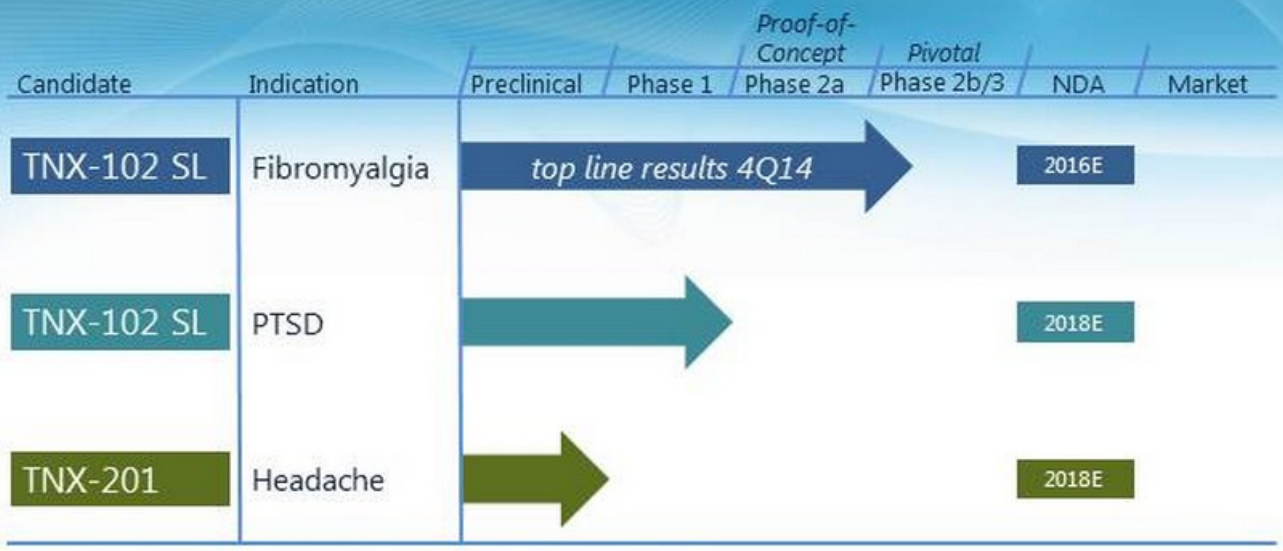
Fibromyalgia (FM): BESTFIT trial of TNX-102 SL fully enrolled
- Top line results to be reported in 4Q 2014
- Strong evidence of clinical benefit in Phase 2a
- Measuring impact on pain relief

Additional clinical-stage pipeline
- Post-traumatic stress disorder (PTSD) – targeting sleep pathology
- Tension-type headache – novel molecular target

All intellectual property owned by Tonix outright – no royalties

Experienced team, strong balance sheet
- Track record of success in drug approvals and value creation
- Well-capitalized to execute on key near-term milestones

Development programs



TNX-102 SL is an Investigational New Drug and is not approved for any indication

New approaches, new targets

Targeting sleep quality is a new approach to FM

- Non-restorative sleep linked to pain and fatigue
- Restorative sleep improves FM symptoms
- Goal – to introduce an effective and well-tolerated new therapeutic with the potential to decrease use of opiates

Targeting sleep quality is a new approach to PTSD

- Non-restorative sleep linked to hyper-vigilance and arousals
- Restorative sleep improves processing of emotionally charged memories
- Goal – to introduce an effective and well-tolerated new therapeutic with the potential to decrease use of opiates

Novel molecular target in tension headache

- Targets of acetaminophen and barbiturates are not understood
- Goal – to introduce an effective and well-tolerated new therapeutic with the potential to decrease use of barbiturates

Fibromyalgia – a significant therapeutic market

5 million U.S. patients*

2.6 million diagnosed; 2.4 million receiving treatment**

Three FDA approved prescription medications

Category	Product	Company	Prior Indication	Approval Year in FM	2012 U.S. Sales in FM***
Membrane Stabilizer	Lyrica®	Pfizer	Pain (neuropathic)	2007	$475 million
SNRI	Cymbalta®	Eli Lilly	Depression	2008	$600 million
	Savella®	Forest	Depression+	2009	$100 million
Sleep Quality	TNX-102 SL	Tonix	Muscle Spasm	2017E	

** National Institutes of Health, U.S. Department of Health and Human Services*
*** Robinson et al, Pain 2012;13:1366-76.*
**** Estimates based on information from publicly-available sources*
+ EU only
SNRI = Serotonin-Norepinephrine Reuptake Inhibitor

Fibromyalgia: a large opportunity for an effective, well-tolerated, differentiated product

Chronic, widespread pain with sleep, fatigue, mood, and memory problems

- Impairs daily function and productivity: poor quality of life
- "Central pain" - originates in the brain
- Typical patient has onset at 30-40 years of age with persistence for rest of life
- Predominantly female

Patients remain unsatisfied despite approved products

- Patients often take multiple medications ("polypharmacy")
- 'Off-label' use of opioids and sedative-hypnotics despite no sustained benefit
- FM featured within FDA's Patient-Focused Drug Development initiative

Expensive, burdensome condition for the healthcare system

- Health utilization and medication costs are substantial
- Managed care / payers recognize need for new therapies

Results of fibromyalgia survey – 1,700 subjects*

Resource utilization over preceding 12 months	
Outpatient visits	82.9 %
Any emergency room visit	40.2 %
Mean number of emergency room visits†	2.4

Productivity measures over preceding 12 months	
Missed any work due to FM	47.4 %
Mean days of work missed†	58.4
Received disability income benefits	29.9 %
Mean months on disability†	10.6

† *Means include only subjects who experienced the event.*

* *Robinson et al, Pain Med. 2012;13(10):1366-76.*

Inter-relationship of pain and poor quality sleep: new target for drug therapy

>90% of FM patients complain of poor sleep quality*

- Non-restorative sleep linked to hyper-vigilance
- Restorative sleep improves FM symptoms

Sleep quality of FM patients can be objectively measured: Cyclic Alternating Pattern (CAP)

- A1 patterns indicate sleep stability
- A2, A3 patterns indicate sleep instability (poor sleep quality)

Drugs that decrease A2, A3 as percent of total CAP also improve FM symptoms**

- Sodium oxybate: a potent hypnotic, not approved for FM
- TNX-102: low-dose cyclobenzaprine, a drug previously approved at higher doses as a muscle relaxant

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* *Source: Swick, Ther. Adv. Musculoskel. Dis. 2011;3(4):167-178.*
** *Source: Moldofsky et al., J Rheum. 2010;37(10):2156-66.*

Phase 2a trial of TNX-102 capsules in FM

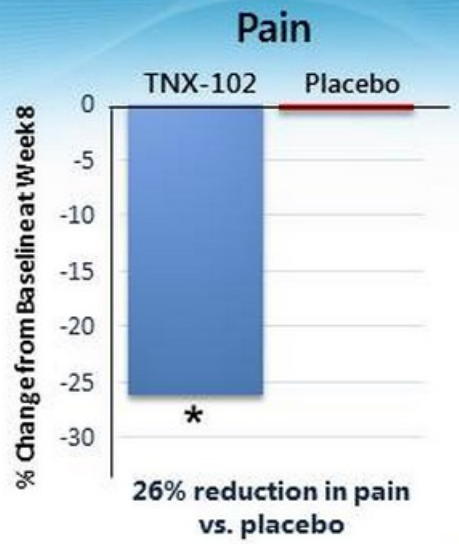
Double-blind, randomized, placebo-controlled
Conducted at two academic centers in Canada

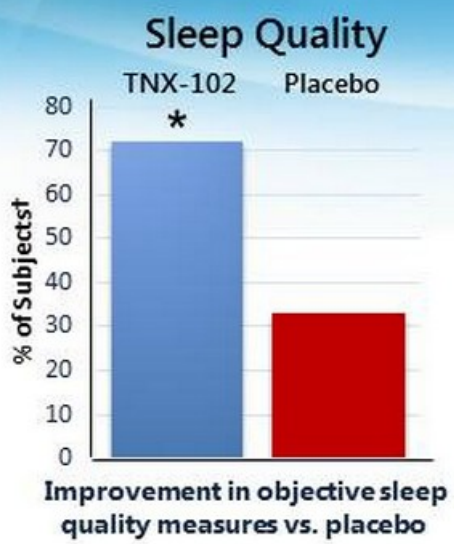
Enrolled 36 subjects with fibromyalgia; 18 per arm
TNX-102 capsules or placebo taken between dinner and bedtime daily

Eight-week, dose-escalating study
Daily dosing ranged from 1 – 4 mg of TNX-102

Source: Moldofsky et al., J Rheum. 2011;38(12):2653-63 - http://jrheum.org/content/early/2011/08/30/jrheum.110194.full.pdf+html

Positive efficacy results from Phase 2a trial of TNX-102 capsules in FM





$p < 0.05$

† *Improving at least one night of* $CAP_{A2+A3(norm)} \leq 33\%$

Mean TNX-102 dose at trial end = 3.5 mg

Safety results from Phase 2a trial of TNX-102 capsules in FM

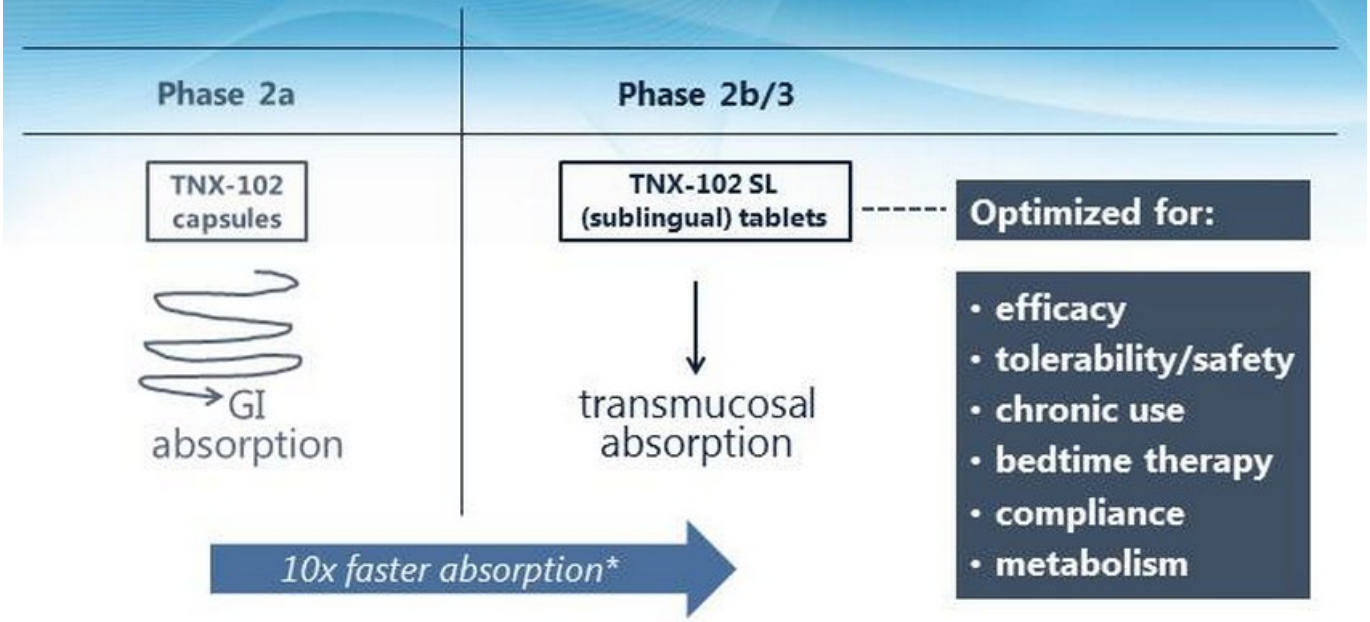
No serious adverse events

No discontinuations due to adverse events in treatment arm

Types of adverse events consistent with approved cyclobenzaprine products

Adverse Event	TNX-102, % (N=18)	Placebo, % (N=18)
Any adverse event	*83*	*83*
Headache	39	17
Dry mouth	33	6
Somnolence	22	11
Constipation	17	6
Dizziness	17	6
Nausea	11	28
Flu syndrome	11	6
Rhinitis	11	6
Pruritus	11	0

TNX-102 SL is a sublingual tablet formulation optimized for chronic use *at bedtime*



* Absorption lag time (t_{lag}) based on clinical pharmacokinetic data.

TNX-102 SL – registration program in FM

Pre-Phase 3 meeting held with FDA in February 2013

Remaining clinical work to support New Drug Application:

Two adequate and well-controlled efficacy and safety trials in FM patients
Primary efficacy endpoint = pain

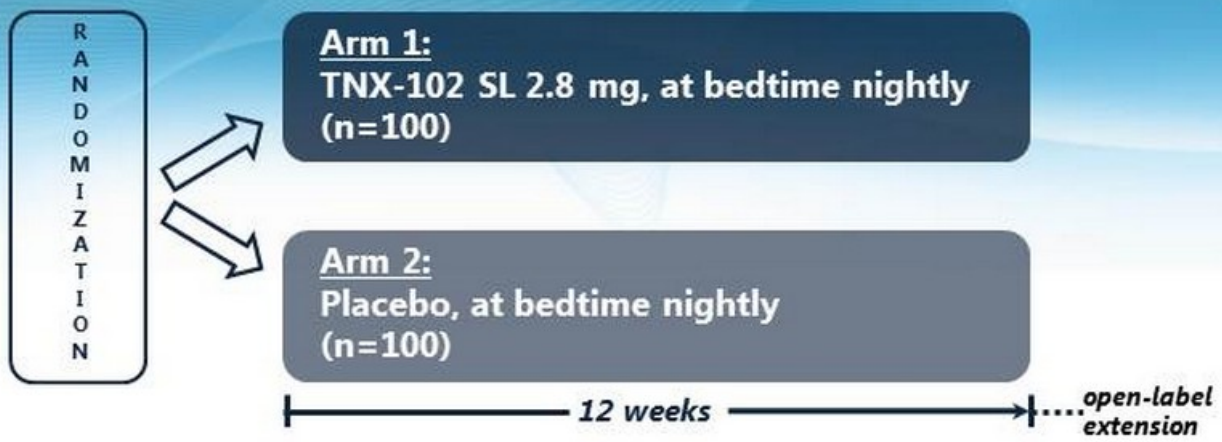
- ☑ *First trial has completed enrollment – "BESTFIT"*
- ☐ *Top line BESTFIT data expected in Q4*

Long-term exposure data to support chronic use label
100 subjects for six months, 50 subjects for one year

- ☑ *Open-label extension study is underway*

Definitive repeat dose pharmacokinetic "bridging" study

"BESTFIT" potential pivotal trial – fully enrolled



BESTFIT: **BE**dtime **S**ublingual **T**NX-102 SL as **F**ibromyalgia **I**ntervention **T**herapy

Randomized, double-blind, placebo-controlled; 17 U.S. sites

Primary efficacy endpoint = change in pain at week 12 vs. baseline (Numeric Rating Scale)

Top-line results expected in 4Q 2014

If successful, will serve as first of two pivotal studies to support TNX-102 SL approval in FM

TNX-102 SL – opportunity in PTSD

8.4 million U.S. patients*

4.2 million receiving medical treatment**

Two FDA approved prescription medications

Category	Product	Company	Prior Indication	Approval Year in PTSD
SSRI	Paxil®	Glaxo	Depression	2001
	Zoloft®	Pfizer	Depression	1999
Sleep Quality	TNX-102 SL	Tonix	Muscle Spasm	NDA 2018E

Phase 2 efficacy study of TNX-102 SL to begin in 3Q 2014

Leverage fibromyalgia formulation, clinical experience, manufacturing know-how

** National Institutes of Health, U.S. Department of Health and Human Services*
*** Wang et al., Arch Gen Psych. 2005;62(6):167-78.*
SSRI = Selective Serotonin Reuptake Inhibitor

PTSD is an important public health problem

3.5% of U.S. adult population has suffered from PTSD in past 12 months*

- Experiencing any trauma can lead to PTSD
- High incidence among U.S. soldiers and veterans
- Associated with suicide and unpredictable violent behaviors
- Patients desperate despite two FDA approved drugs; no new treatment in >10 years

Overlap between PTSD and FM

- ~50% of FM or PTSD patients meet criteria for the other disorder
- Patients experience disturbed sleep
- Widespread pain is considered "co-morbid" with PTSD
- Opioid and sedative-hypnotic drug misuse common

* *National Institutes of Mental Health & National Institutes of Health 2010*

Inter-relationship of PTSD and poor quality sleep: a new clinical target for drug therapy

PTSD patients complain of poor sleep quality as a core symptom

Distressing dreams (nightmares) are part of "re-experiencing"

Restless sleep is part of "hyper-arousal"

Poor sleep quality after trauma is linked to onset of PTSD

Poor sleep correlates with depression, substance abuse and suicide

Drugs used off-label in PTSD share mechanisms with TNX-102 SL

Trazodone is an antidepressant used at bedtime

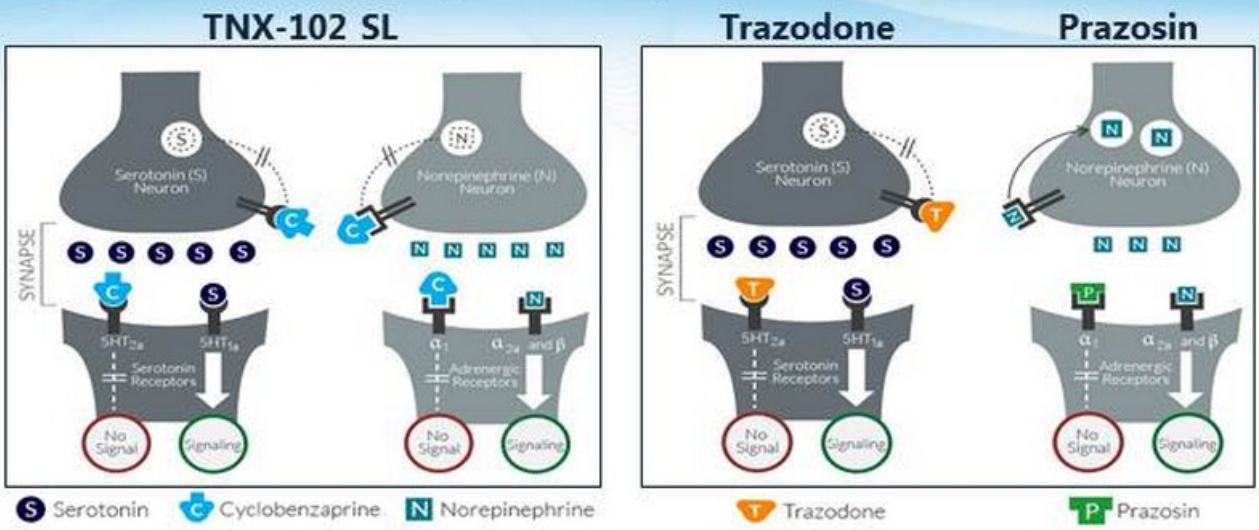
→ *blocks the 5-HT2A receptor*

Prazosin is a high blood pressure medicine used at bedtime

→ *blocks the α-1 adrenergic receptor*

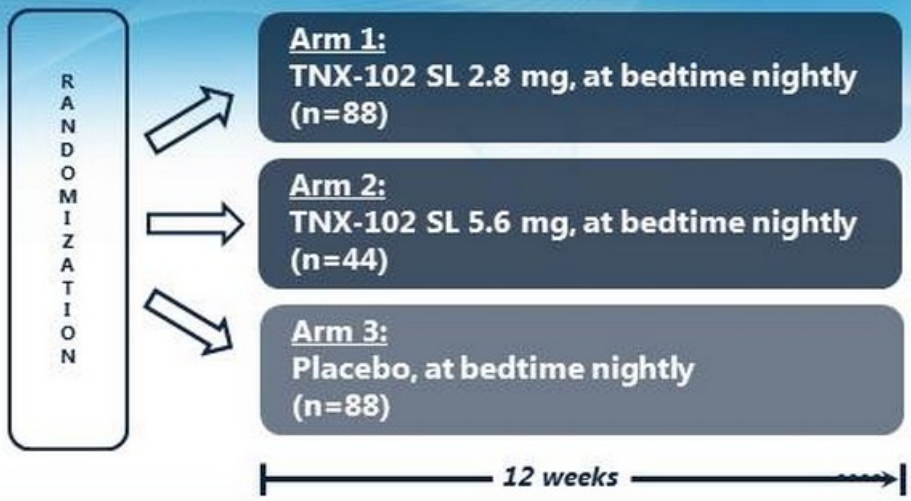
TNX-102 SL shares activity with drugs used off-label in PTSD

- Trazodone inhibits serotonin $5HT_{2a}$ receptors and serotonin reuptake (SARI)
- Prazosin blocks norepinephrine α_1 receptors



SARI = Serotonin Receptor Antagonist & Reuptake Inhibitor (Stahl SM, CNS Spectrums, 2009;14(10):536-46).
TNX-102 SL is an Investigational New Drug and is not approved for any indication.

Phase 2 trial of TNX-102 SL to begin in 3Q 2014



Randomized, double-blind, placebo-controlled

N=220; 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

TNX-201 – Episodic tension-type headache (ETTH)

92 million adults in the U.S. experience tension-type headaches*

Constant band of pressure on the back/sides of head; "squeezed in a vice" feeling

Projected that 34 million experience frequent episodes**, 12 million seek a medical consult***

Three FDA approved prescription medications – all contain barbiturates

Over-the-counter medications are inadequate for many

Category	Product	Company	Regulatory Status	Approval Year in ETTH
Barbiturate	Fiorinal®	Actavis	Approved NDA	1990
	Fioricet®	Actavis	Approved NDA	1992
Barbiturate + Opiate	Fioricet with Codeine®	Actavis	Approved NDA	1992
New molecular target	TNX-201	Tonix	Pre-IND	NDA 2018E

** Schwartz et al., JAMA 1998;279(5):381-3; Chowdhury, Ann Ind Acad Neurol 2012;15(5):83-88.*

*** Russell, J Headache Pain 2005;6(6):441-47.*

**** Scher et al., 2010; due to the lack of prescription products for tension-type headache, most patients self-treat*

TNX-201 to enter clinical development in 2014

TNX-201 (single isomer isometheptene)

- Non-barbiturate, non-opioid
- Racemic mixture > 50 years of use in combination products for headache in the U.S.
  - Not FDA approved for any indication*
  - Limited availability, quality concerns via compounding pharmacies

Tonix non-clinical research supports the rationale for single isomer development

- Pre-IND meeting with FDA held in January 2014
- Comparative pharmacokinetic and safety study to be conducted in 4Q 2014

** Products containing racemic isometheptene are marketed as unapproved products in the U.S.; marketing withdrawal has been sanctioned by the FDA since 2010.*

Intellectual property

All IP wholly-owned by Tonix – no royalties / future obligations

TNX-102 SL
Fibromyalgia, PTSD

Pharmacokinetics (PK)
Patents filed around unique PK profile
Protection expected to 2033

Composition-of-matter
Patent filed - "Eutectic"
Protection expected to 2034

Method-of-use
FM: patent issued, 3Q 2020 expiry
PTSD: patent filed in 2010

TNX-201
Headache

Composition-of-matter
Patent filed – single isomer
Protection expected to 2033

Milestones – recent and upcoming

Corporate

- ☑ Jan 2014 – $40.7 million net proceeds from common stock offering

TNX-102 SL

- ☑ 3Q 2013 – Began BESTFIT trial in FM
- ☑ 4Q 2013 – Began open-label extension study in FM
- ☐ 3Q 2014 – Start Phase 2 efficacy study in PTSD
- ☐ 4Q 2014 – Report top line results of BESTFIT trial in FM

TNX-201

- ☑ Jan 2014 – Held Pre-IND meeting for tension-type headache
- ☐ 3Q 2014 – File IND for tension-type headache
- ☐ 4Q 2014 – Conduct clinical pharmacology study

Management team

Seth Lederman, MD
CEO

Leland Gershell, MD, PhD
CFO

Bruce Daugherty, PhD
CSO

Don Kellerman, PharmD
SVP, Clinical Development
& Regulatory Affairs

Board of directors

Seth Lederman, MD (Chair)
Targent Pharmaceuticals
Vela Pharmaceuticals

Stuart Davidson
Alkermes
Combion

Patrick Grace
WR Grace
Chemed

Donald Landry, MD, PhD
Chair, Department of Medicine
Columbia University

Ernest Mario, PhD
Glaxo, ALZA
Reliant Pharmaceuticals

Charles Mather
Janney Montgomery Scott
Cowen, Smith Barney

John Rhodes
NYSERDA, NRDC
Booz Allen Hamilton

Samuel Saks, MD
ALZA
Jazz Pharmaceuticals

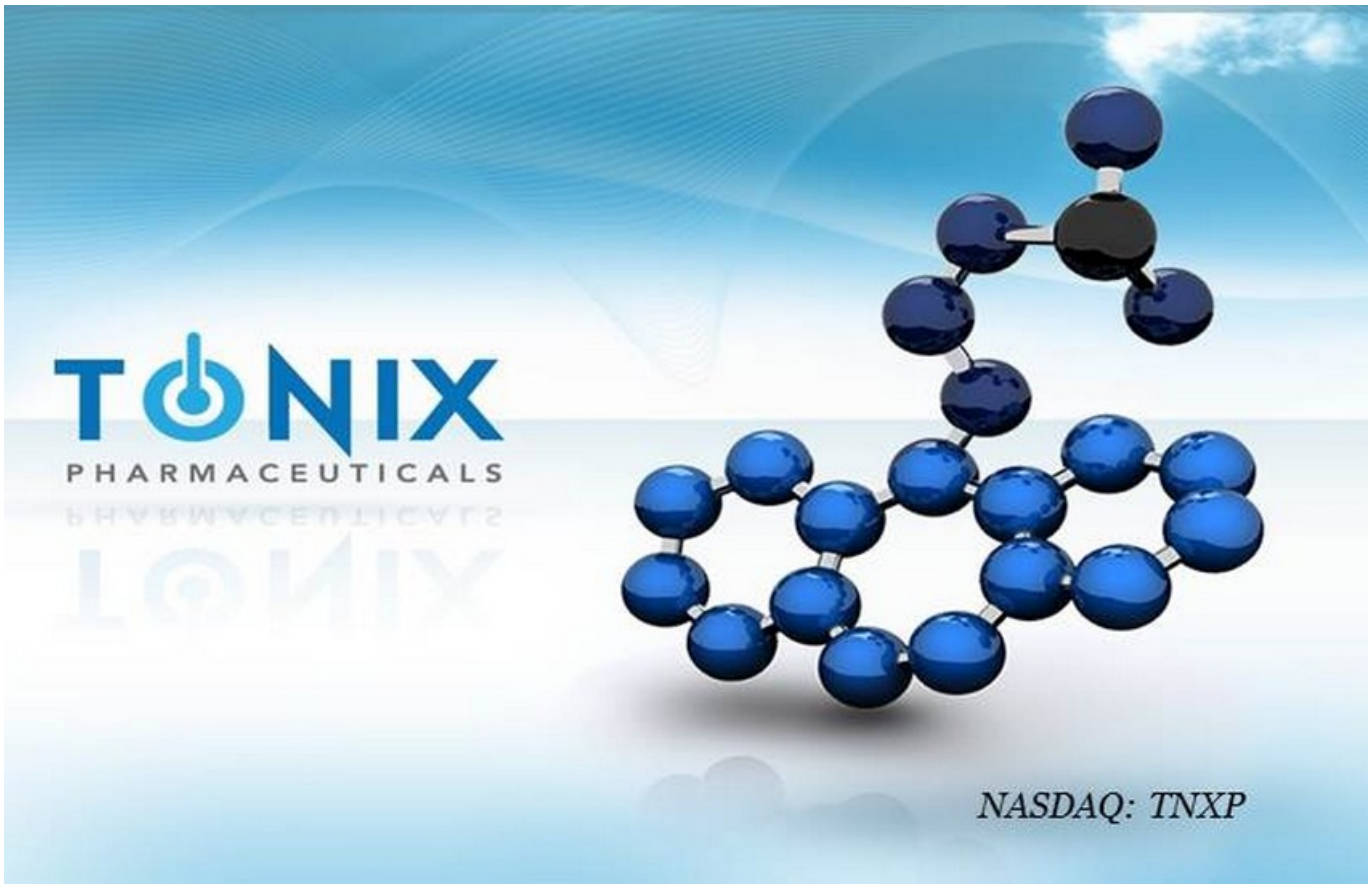
Financial summary

NASDAQ: TNXP	
Cash reported at March 31, 2014	$ 49.5 million
Net cash used in operations in 1Q14	$ 4.0 million
Shares outstanding†	9.9 million

† As of May 16, 2014

Why invest in Tonix now?

- **TNX-102 SL: late-stage clinical program in large market indication**
  - Strong evidence of clinical benefit in Phase 2a
  - Current FM treatment options leave many patients unsatisfied
  - Fibromyalgia is a current focus of the FDA
- **Multiple opportunities (fibromyalgia, PTSD, headache)**
- **Team distinguished by track record of drug development success**
- **Well-capitalized to execute on key near-term milestones**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