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# **Tonix Pharmaceuticals' CEO Highlights Connection Between Disturbed Sleep and New Treatment for Fibromyalgia and Post-Traumatic Stress Disorder on KIDELA TV**

## **New Drug Aims to Improve Sleep Quality, Reduce Pain and Decrease Use of Prescription Opiate Pain-Killers**

NEW YORK, NY -- (MARKETWIRE) -- 08/27/12 -- Tonix Pharmaceuticals Holding Corp. (OTCQB: TNXP) (PINKSHEETS: TNXP) ("TONIX" or the "Company"), a specialty pharmaceutical company developing non-addictive treatments for the chronic pain syndrome, fibromyalgia ("FM") and the anxiety disorder, post-traumatic stress disorder ("PTSD"), announced today the airing of an interview with CEO Seth Lederman on KIDELA TV. TONIX's lead drug targets sleep quality, which is disturbed in patients with FM and PTSD.

In an interview with KIDELA TV, found at <http://www.kidela.com/tv/kidela-interviews-tonix-pharmaceuticals/>, Seth Lederman, M.D., Chief Executive Officer of TONIX noted that FM affects 5 million Americans age 18 or older and that FM patients have an associated sleep disorder that prevents them from getting restful or restorative sleep.

FM is a common and complex central nervous system condition characterized by chronic diffuse musculoskeletal pain, increased pain sensitivity at multiple tender points, fatigue, abnormal pain processing, and disturbed sleep, and often features psychological stress. Despite the fact that most FM patients suffer from poor sleep, there are no medications indicated for FM that work by improving sleep. Currently available prescription sleep drugs indicated for insomnia increase the quantity of sleep, but not the quality.

PTSD is an anxiety disorder that can develop from seeing or experiencing a terrifying event or ordeal in which there was the threat or actual occurrence of grave physical harm. PTSD was once associated primarily with war veterans, but civilian PTSD can be triggered by serious accidents, natural or human-caused disasters, exposure to terrorist attacks, violent personal assaults or sexual abuse, or even sudden and major emotional losses. People with PTSD experience persistent symptoms that include strong and unwanted memories of the event, bad dreams, emotional numbness, intense guilt or worry, angry outbursts, feelings of anxiety, and avoiding thoughts and situations that are reminders of the trauma. The National Institute of Mental Health estimates that PTSD affects about 7.7 million American adults at some point during their lifetime.

PTSD is linked to suicide. Dr. Lederman noted the troubling development that U.S. Army

suicides more than doubled in July 2012 over the previous month.

Patients with FM and PTSD frequently wind up using prescription opiate pain-killers which are not useful because their pain originates from a disorder in the brain and not from physical injuries to their bodies. Patients with FM and PTSD also frequently wind up using prescription sleep drugs, which are not useful for their conditions, because these drugs help with the quantity of sleep, but not the quality; they have a problem with the quality of their sleep and not the quantity.

Dr. Lederman said that TONIX is developing a new drug formulation to help FM and PTSD sufferers obtain the restorative sleep they need. In patients with FM, increased restorative sleep leads to a reduction in their chronic pain. TONIX is working toward the goal of improved sleep quality for FM and PTSD patients through its novel sublingual formulation of cyclobenzaprine, TNX-102 SL. Cyclobenzaprine is the active ingredient in two prescription muscle relaxants that have been approved by the U.S. Food and Drug Administration and are marketed by other companies.

### **About TNX-102**

TNX-102 is a bedtime medicine containing a novel dose of cyclobenzaprine. TONIX is designing TNX-102 for faster and more efficient absorption relative to currently marketed cyclobenzaprine products. TONIX believes its sublingual formulation, TNX-102 SL, administered at bedtime will provide more targeted sleep quality effects with less likelihood of side-effects than commercially available cyclobenzaprine preparations. Previous studies of the mechanism by which cyclobenzaprine works have discovered that it acts selectively on serotonin receptor type 2a (5HT2a) and alpha-2 adrenergic receptors. Serotonin is thought to play a major role in the central inhibition of pain.

### **About TONIX**

TONIX is developing innovative prescription medications for challenging disorders of the central nervous system. The Company targets conditions characterized by significant unmet medical need, inadequate existing treatment options, and high dissatisfaction among both patients and physicians. TONIX's core technology improves the quality of sleep in patients with chronic pain syndromes. TONIX's lead product is designed to be a fundamental advance in sleep hygiene and pain management and to be safer and more effective than currently available treatments. TONIX's products are the result of a program to harvest advances in science and medicine to search for potential therapeutic solutions among known pharmaceutical agents. TONIX is developing new formulations that have been optimized for new therapeutic uses. Its most advanced product candidate, sublingual TNX-102 for fibromyalgia and PTSD, is a novel dosage formulation of cyclobenzaprine, the active ingredient in two U.S. FDA-approved muscle relaxants. To learn more about the Company and its pipeline of treatments for central nervous system conditions, please visit [www.tonixpharma.com](http://www.tonixpharma.com).

*Certain statements in this press release are forward-looking within the meaning of 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," "estimated" 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 FDA clearances or approvals and noncompliance with FDA regulations. As with any pharmaceutical under development, there are significant risks in the development, regulatory approval and commercialization of new products. TONIX does not undertake an obligation to update or revise any forward-looking statement. Investors should read the risk factors set forth in the Annual Report on Form 10-K filed with the SEC on March 30, 2012 and future periodic reports filed with the Securities and Exchange Commission. All of the Company's forward-looking statements are expressly qualified by all such risk factors and other cautionary statements. The information set forth herein speaks only as of the date hereof.*

**Contacts:**

***Tonix Pharmaceuticals Holding Corp.***

Benjamin Selzer  
Chief Operating Officer  
(212) 980-9155 x106  
[Email Contact](#)

***LHA***

Anne Marie Fields  
(212) 838-3777  
[Email Contact](#)  
or  
Bruce Voss  
(310) 691-7100  
[Email Contact](#)