

May 15, 2015



# Tonix Pharmaceuticals Presents Data at the Annual Meeting of the Society for Biological Psychiatry

## Results Support Development of TNX-102 SL for Post-Traumatic Stress Disorder

NEW YORK, May 15, 2015 (GLOBE NEWSWIRE) -- Tonix Pharmaceuticals Holding Corp. (Nasdaq:TNXP) ("Tonix") today presented results from non-clinical studies at the 2015 Annual Meeting of the Society of Biological Psychiatry in Toronto, Canada.

The studies were designed to better understand the activities of cyclobenzaprine ("CBP") and trazodone ("TZD") and their respective major metabolites on neurotransmitter systems in the central nervous system ("CNS"). CBP is the active ingredient in Tonix's TNX-102 SL, a pharmaceutical candidate currently in clinical development for post-traumatic stress disorder (PTSD) and fibromyalgia. TZD, despite lacking U.S. Food and Drug Administration approval for the treatment of PTSD, is commonly prescribed for this indication.

Bruce Daugherty, Ph.D., chief scientific officer of Tonix, commented, "We have previously reported that CBP functions as a potent antagonist to several CNS receptors, including the serotonin type 2A receptor. This receptor, to which TZD also acts as an antagonist, is believed to play a key role in sleep physiology. Recently, we have replicated findings by others that the major metabolite of TZD, meta-chlorophenylpiperazine, or mCPP, which is suspected to cause panic- and flashback-inducing effects in combat PTSD, functions as a potent agonist to the serotonin 2C receptor. In the current studies, neither CBP nor its major metabolite, norcyclobenzaprine, or nCBP, demonstrated any agonist effects on the serotonin 2C receptor. These observations favor the clinical development of TNX-102 SL as a suitable bedtime therapy to target sleep disturbance and improve daytime symptoms of PTSD."

These data were presented in Poster #728, "Serotonin Receptor Profiles of Bedtime Pharmacotherapies Targeting Posttraumatic Stress Disorder (PTSD)". The poster will be made available on Tonix's website at [www.tonixpharma.com](http://www.tonixpharma.com).

### About Tonix Pharmaceuticals

Tonix Pharmaceuticals is dedicated to the development of next-generation medicines for common yet challenging disorders of the central nervous system, characterized by chronic disability, inadequate treatment options, high utilization of healthcare services, and significant economic burden. Tonix's TNX-102 SL is currently being evaluated in the Phase 3 AFFIRM study in fibromyalgia and in the Phase 2 AtEase study in post-traumatic stress disorder. A Phase 2 proof-of-concept study of TNX-201 for episodic tension-type headache

will begin in the second quarter of 2015. To learn more, please visit [www.tonixpharma.com](http://www.tonixpharma.com).

### **Cautionary Note on Forward Looking Statements**

*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," "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 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 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 February 27, 2015 and future periodic reports filed with the Securities and Exchange Commission. All of Tonix'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.*

CONTACT: Tonix Pharmaceuticals Holding Corp.  
Leland Gershell  
Chief Financial Officer  
(212) 980-9155 x104  
leland.gershell@tonixpharma.com

Martini Communications  
Amy Martini (investors)  
amartini@martinicomcommunications.com

Dian Griesel Int'l  
Susan Forman/Laura Radocaj (media)  
(212) 825-3210  
sforman@dgicomm.com  
lradocaj@dgicomm.com

Source: Tonix Pharmaceuticals Holding Corp.