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): July 11, 2022

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.)**

26 Main Street, Chatham, New Jersey 07928
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (862) 904-8182

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))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	TNXP	The NASDAQ Capital Market

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 July 11, 2022, Tonix Pharmaceuticals Holding Corp. (the "Company") issued a press release announcing the development of its TNX-601 ER (tianeptine oxalate extended-release tablets) product candidate, a naloxone-free formulation of its TNX-601 product candidate designed to confer abuse-deterrence, for the treatment of major depressive disorder ("MDD"), posttraumatic stress disorder, and neurocognitive dysfunction associated with corticosteroid use. A copy of the press release which discusses this matter is furnished hereto as Exhibit 99.01, and incorporated herein by reference.

The information in this Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.01 attached hereto, shall not be deemed "filed" for purposes of Section 18 of the United States Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall they be deemed incorporated by reference in any filing under the United States Securities Act of 1933 or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 8.01 Other Events.

On July 11, 2022, the Company issued a press release announcing the development of TNX-601 ER. The proposed mechanism of action of TNX-601 ER is distinct from traditional monoaminergic antidepressants in the U.S. Tianeptine has been linked to illicit misuse at much higher doses than those reported to be effective in the treatment of MDD. TNX-601 ER is a naloxone-free tablet formulated with inactive ingredients that the Company believes will make the tablet more difficult to adulterate for misuse and abuse, while maintaining extended-release characteristics, even if the tablet is subjected to physical manipulation or chemical extraction. The potentially abuse deterrent ingredients include gel forming polymers which impede extraction, and excipients which cause nasal irritation. In addition, the tablet's hardness makes it difficult to crush, cut or grind to fine particle size, which hinders efforts to misuse by insufflation or intravenous routes. As tianeptine's unique metabolic pathway is independent of the hepatic P450 system, the Company believes that TNX-601 ER has a reduced risk of drug-drug interactions compared to most antidepressants. TNX-601 ER is designed for once daily dosing, which is believed to provide an adherence advantage relative to the three times per day dosing of other immediate-release sodium salt products currently available outside of the U.S.

This Current Report on Form 8-K 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 Private Securities Litigation Reform Act, as amended, including those relating to the development of TNX-601 ER, the Company's

product development, clinical trials, clinical and regulatory timelines, market opportunity, competitive position, possible or assumed future results of operations, business strategies, potential growth opportunities and other statement that are predictive in nature. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which we operate and management's current beliefs and assumptions.

These statements may be identified by the use of forward-looking expressions, including, but not limited to, "expect," "anticipate," "intend," "plan," "believe," "estimate," "potential," "predict," "project," "should," "would" and similar expressions and the negatives of those terms. These statements relate to future events or our financial performance and involve known and unknown risks, uncertainties, and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include those set forth in the Company's filings with the SEC. Prospective investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this press release. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

Item 9.01 Financial Statements and Exhibits.

(d)

Exhibit No.	Description.
99.01	Press release of the Company, dated July 11, 2022
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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: July 11, 2022

By: /s/ Bradley Saenger
Bradley Saenger
Chief Financial Officer

Exhibit 99.01

Tonix Pharmaceuticals Announces Development of TNX-601 ER, a Potential Abuse Deterrent, Extended-Release Formulation of Tianeptine Oxalate for the Treatment of Major Depressive Disorder

Naloxone-Free Formulation of Tianeptine is an Extended-Release Tablet that Includes Inactive Ingredients and Compression Properties Designed to ConferAbuse Deterrence

Once-Daily Tablet Formulation of Tianeptine is Bioequivalent to the Three Times a Day Antidepressant Marketed in Europe for Over 30 years

Tianeptine's Enhancement of Neuroplasticity in Animal Models of Stress Implies a Distinct Indirect Glutamatergic Mechanism of Action Relative to Antidepressants Marketed in the U.S.

Planning to Initiate Enrollment in U.S. Phase 2 Study in First Quarter 2023, Pending FDA Clearance of IND

CHATHAM, N.J., July 11, 2022 – Tonix Pharmaceuticals Holding Corp. (Nasdaq: TNXP) (Tonix or the Company), a clinical-stage biopharmaceutical company, today announced development of TNX-601 ER (tianeptine oxalate extended-release tablets), a naloxone-free formulation of TNX-601 designed to confer abuse-deterrence, for the treatment of major depressive disorder (MDD)[1]. Tonix expects to initiate a Phase 2 study of TNX-601 ER for the treatment of MDD in the first quarter of 2023, pending U.S. Food and Drug Administration (FDA) clearance of its Investigational New Drug (IND) application.

Tonix's TNX-601 ER is being developed as a treatment for MDD, posttraumatic stress disorder, and neurocognitive dysfunction associated with corticosteroid use. Tianeptine sodium (amorphous) immediate release (IR) tablets have been available in Europe and many countries in Asia and Latin America for the treatment of MDD over the more than three decades since it was first marketed in France in 1989. No tianeptine-containing product has been approved by the FDA. The proposed mechanism of action of TNX-601 ER is distinct from traditional monoaminergic antidepressants in the U.S. In addition to its glutamatergic properties central to its antidepressant effect, tianeptine has weak μ-opioid receptor agonist properties and has been linked to illicit misuse at much higher doses than those reported to be effective in the treatment of MDD[2]. Previously, Tonix was developing a naloxone-containing tablet, TNX-601 CR (tianeptine oxalate and naloxone controlled-release) for MDD, that was designed to mitigate the risk of parenteral abuse.

"TNX-601 ER is a naloxone-free tablet formulated with inactive ingredients that we believe will make the tablet more difficult to adulterate for misuse and abuse, while maintaining extended-release characteristics, even if the tablet is subjected to physical manipulation, and/or chemical extraction," said Seth Lederman, M.D., President and Chief Executive Officer of Tonix Pharmaceuticals. "The potentially abuse deterrent ingredients include gel forming polymers which impede extraction, and excipients which cause nasal irritation. In addition, the tablet's hardness makes it difficult to crush, cut or grind to fine particle size, which hinders efforts to misuse by insufflation or intravenous routes."

"The efficacy of tianeptine sodium IR is comparable to both selective serotonin inhibitor (SSRI) and tricyclic antidepressants[3,4] while being associated with a low incidence of sexual dysfunction than either of those classes[5,6], and no associated derangement of sleep architecture, sedation effects, weight gain, or cognitive impairment[7]," said Gregory Sullivan, M.D., Chief Medical Officer of Tonix Pharmaceuticals. "Given tianeptine's unique metabolic pathway, which is independent of the hepatic P450 system, we believe that TNX-601 ER has a reduced risk of drug-drug interactions compared to most antidepressants[7]. Tianeptine's antidepressant activity is believed to relate to indirect modulation of the glutamatergic system. While it does not have measurable interactions with the NMDA, AMPA or kainate receptors, tianeptine is known to modulate AMPA receptor trafficking and to promote synaptic plasticity in hippocampus under conditions of stress or corticosteroid use. In animal models, tianeptine restores neuroplasticity and reverses stress-induced impairments in synaptic glutamate neurotransmission, which are perturbed in depression.[8] Additionally, TNX-601 ER is designed for once daily dosing, which is believed to provide an adherence advantage relative to the three times per day dosing of the immediate-release sodium salt products available in Europe and other jurisdictions around the world."

[1]TNX-601 ER is in the pre-IND (Investigational New Drug) stage of development and is not approved for any indication

[2]Lauhan, R., et al. *Psychosomatics* **2018**, *59* (6), 547–553.

[3]Jeon, H. J., et al. ..*J. Clin. Psychopharmacol.* **2014**, *34* (2), 218–225.

[4]Emsley, R., et al. *J. Clin. Psychiatry* **2018**, *79* (4)

[5]Bonierbale M, et al. *Curr Med Res Opin* **2003**, *19*(2):114-124.

[6]Costa e Silva, J. A., et al. *Neuropsychobiology* **1997**, *35* (1), 24–29.

[7]Wagstaff, A. J. et al. *CNS Drugs* **2001**, *15* (3), 231–259.

[8]McEwen, B. S., et al. *Mol. Psychiatry* **2010**, *15* (3), 237–249.

About Depression

According to the National Institute of Mental Health, an estimated 21 million adults in the U.S. in 2020 experienced at least one major depressive episode[1], with highest prevalence among individuals aged 18-25 at a rate of 17.0%. For approximately 2.5 million adults in the U.S., adjunctive therapies are necessary for depression treatment.[2,3] Depression is a condition characterized by symptoms such as a depressed mood or loss of interest or pleasure in daily activities most of the time for two weeks or more, accompanied by appetite changes, sleep disturbances, motor restlessness or retardation, loss of energy, feelings of worthlessness or excessive guilt, poor concentration, and suicidal thoughts and behaviors. These symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. The majority of people who suffer from depression do not respond adequately to initial antidepressant therapy.[4]

[1]Data Courtesy of SAMHSA on Past Year Prevalence of Major Depressive Episode Among U.S. Adults (2020). Retrieved from http://www.nimh.nih.gov/health/statistics/major-depression.shtml

[2]IMS NSP, NPA, NDTI MAT-24-month data through Aug 2017.

[3]Kubitz N, et al. (2013) *PLOS One*,. 8(10):e76882. doi: 10.1371/journal.pone.0076882. PMID: 24204694;

[4]Rush AJ, et al. (2007) *Am J. Psychiatry* 163:11, pp. 1905-1917 (STAR*D Study).

About TNX-601 ER

TNX-601 ER is a novel oral formulation of tianeptine oxalate designed for once-daily daytime dosing that is in the pre-IND (Investigational New Drug) stage of development

for the treatment of MDD. Tonix reported the official minutes of an FDA Pre-IND meeting on March 22, 2021. Tianeptine sodium (amorphous) immediate release (3 times daily) was first marketed for depression in France in 1989 and has been available for decades in Europe, Russia, Asia, and Latin America for the treatment of depression. Tianeptine sodium has an established safety profile from decades of use in these jurisdictions. Currently there is no tianeptine-containing product approved in the U.S. and no extended-release tianeptine product approved in any jurisdiction. Tonix discovered a novel oxalate salt of tianeptine that may provide improved stability, consistency, and manufacturability compared to known salt forms of tianeptine. Tianeptine is believed to work in depression as an indirect modulator of the glutamatergic system, without direct binding NMDA, AMPA or kainate receptors. Tianeptine reverses stress induced increases in AMPA receptor trafficking, restoring hippocampal long-term potentiation and reversing the neuroplastic changes from stress and corticosteroid exposure. Tianeptine and its MC5 metabolite are also weak mu-opioid receptor (MOR) agonists, that present a potential abuse liability if illicitly misused in large quantities (8-80 times the therapeutic dose). In patients who were prescribed tianeptine for depression, the French Transparency Committee found an incidence of misuse of approximately 1 case per 1,000 patients treated[1] suggesting low abuse liability when used at the antidepressant dose in patients prescribed tianeptine for depression. Clinical trials have shown that cessation of a therapeutic course of tianeptine does not appear to result in dependence or withdrawal symptoms following 6-weeks[2,3,4–6], 3-months[7], or 12-months[8] of treatment. Tianeptine's reported pro-cognitive and anxiolytic effects as well as its ability to attenuate the neuropathological effects of excessive stress responses suggest that it may also be used to treat posttraumatic stress disorder. TNX-601 ER is expected to have patent protection through 2037.

[1]Haute Authorite de Sante; Transparency Committee Opinion. Stablon 12.5 Mg, Coated Tablet, Re- Assessment of Actual Benefit at the Request of the Transparency Committee. December 5, 2012.
[2]Emsley, R., et al. *J. Clin. Psychiatry* **2018**, *79* (4)
[3]Bonierbale M, et al. *Curr Med Res Opin* **2003**, *19*(2):114-124.[4]Guelfi, J. D., et al. *Neuropsychobiology* **1989**, *22* (1), 41–48.
[5]Invernizzi, G. et al., *Neuropsychobiology* **1994**, *30* (2–3), 85–93.
[6]Lepine, J. P., et al. *Hum. Psychopharmacol.* **2001**, *16* (3), 219–227.
[7]Guelfi, J. D. et al., *Neuropsychobiology* **1992**, *25* (3), 140–148.
[8]Lôo, H. et al., *Br. J. Psychiatry. Suppl.* **1992**, No. 15, 61–65.

Tonix Pharmaceuticals Holding Corp. *

Tonix is a clinical-stage biopharmaceutical company focused on discovering, licensing, acquiring and developing therapeutics to treat and prevent human disease and alleviate suffering. Tonix's portfolio is composed of central nervous system (CNS), rare disease, immunology and infectious disease product candidates. Tonix's CNS portfolio includes both small molecules and biologics to treat pain, neurologic, psychiatric and addiction conditions. Tonix's lead CNS candidate, TNX-102 SL (cyclobenzaprine HCl sublingual tablet), is in mid-Phase 3 development for the management of fibromyalgia with a new Phase 3 study launched in the second quarter of 2022 and interim data expected in the first quarter of 2023. TNX-102 SL is also being developed to treat Long COVID, a chronic post-acute COVID-19 condition. Tonix expects to initiate a Phase 2 study in Long COVID in the third quarter of 2022. TNX-1300 (cocaine esterase) is a biologic designed to treat cocaine intoxication that is Phase 2 ready and has been granted Breakthrough Therapy Designation by the FDA. TNX-1900 (intranasal potentiated oxytocin), a small molecule in development for chronic migraine, is expected to enter the clinic with a Phase 2 study in the second half of 2022. Tonix's rare disease portfolio includes TNX-2900 (intranasal potentiated oxytocin) for the treatment of Prader-Willi syndrome. TNX-2900 has been granted Orphan-Drug Designation by the FDA. TNX-601 ER (tianeptine oxalate extended-release tablet) is being developed as an antidepressant in the U.S., with a Phase 2 study expected to be initiated in first quarter of 2023 pending IND clearance. Tonix's immunology portfolio includes biologics to address organ transplant rejection, autoimmunity and cancer, including TNX-1500, which is a humanized monoclonal antibody targeting CD40-ligand being developed for the prevention of allograft and xenograft rejection and for the treatment of autoimmune diseases. A Phase 1 study of TNX-1500 is expected to be initiated in the second half of 2022. Tonix's infectious disease pipeline consists of a vaccine in development to prevent smallpox and monkeypox called TNX-801, next-generation vaccines to prevent COVID-19, and a platform to make fully human monoclonal antibodies to treat COVID-19. Tonix's lead vaccine candidates for COVID-19 are TNX-1840 and TNX-1850, which are live virus vaccines based on Tonix's recombinant pox live virus vector vaccine platform.

*****_All of Tonix's product candidates are investigational new drugs or biologics and have not been approved for any indication._

This press release and further information about Tonix can be found atwww.tonixpharma.com.

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," "expect," 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, risks related to the failure to obtain FDA clearances or approvals and noncompliance with FDA regulations; delays and uncertainties caused by the global COVID-19 pandemic; risks related to the timing and progress of clinical development of our product candidates; 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 substantial competition. 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 for the year ended December 31, 2021, as filed with the Securities and Exchange Commission (the "SEC") on March 14, 2022, and periodic reports filed with the SEC on or after the date thereof. 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 thereof.

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