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**NAUREX INC. PRESENTS POSITIVE CLINICAL DATA ON NOVEL MECHANISM ANTIDEPRESSANT CANDIDATE GLYX-13 AT NCDEU 50TH ANNIVERSARY MEETING**

***—Promising Safety Profile in Phase I Study Sets Stage for Upcoming Phase II Trial of GLYX-13 for Adjunctive Use in Treatment of Depression—***

**BOCA RATON, FL and EVANSTON, IL, June 17, 2010** -- Naurex Inc., a clinical stage company developing innovative treatments for depression and other CNS disorders, today reported that it presented data at the NCDEU 50<sup>th</sup> Anniversary Meeting showing that its novel mechanism compound GLYX-13 appeared safe in a Phase I trial. GLYX-13 is a glycine site functional partial agonist (GFPA) selective modulator of the NMDA receptor that is being developed initially for use in depression as adjunctive therapy. The Phase I data showed that adverse events for the groups receiving GLYX-13 and placebo were all rated as mild. There were no signs of the schizophrenia-like side effects associated with other drugs that modulate the NMDA receptor.

“These promising initial data in humans are consistent with the excellent safety profile GLYX-13 demonstrated in preclinical studies,” said Ronald Burch, M.D., Ph.D., chief medical officer at Naurex. “Our goal in developing GLYX-13 is to realize the superior efficacy and speed of onset observed with traditional NMDA receptor modulators, but without the schizophrenia-like side effects that have limited their use. We are encouraged that there was no sign of these effects in this study, especially since they have been observed in past studies of NMDA modulating agents in healthy volunteers. Based on these positive results, and following a recent meeting with the FDA, we are on track to initiate a Phase II proof-of-concept trial later this year in patients with depression who are experiencing inadequate response to their current antidepressant agent.”

The GLYX-13 Phase I trial was a randomized, double-blind, placebo-controlled single ascending dose level study of the safety, tolerability and pharmacokinetics of four dose levels of GLYX-13 in healthy volunteers. The primary outcome measures encompassed observational and laboratory safety parameters, including schizophrenia-like side effects. Adverse events for subjects receiving placebo and GLYX-13 were all rated as mild. No schizophrenia-like side effects were observed, even following administration of single doses of GLYX-13 that were 10-times higher than the expected therapeutic dose based on data from animal studies. The pharmacokinetics of GLYX-13 demonstrated similar or greater drug exposure in humans than in animals at the same doses.

NCDEU is a scientific meeting that focuses on the latest developments in psychopharmacologic clinical research and related methodology in the field of mental health. It is co-sponsored by the National Institute of Mental Health and the American Society of Clinical Psychopharmacology and brings together over 1200 academic and industry investigators, research pharmacists and clinicians. The NCDEU 50<sup>th</sup> Anniversary Meeting is being held June 14–June 17, 2010, at the Boca Raton Hotel in Boca Raton, Florida.

**About GFPA Selective NMDA Modulators**

Glycine site functional partial agonists, which modulate the NMDA receptor in a novel and selective way, are being developed with the goal of achieving the antidepressant efficacy and rapid onset seen with conventional NMDA receptor modulators, but without the psychotomimetic side effects that have limited the utility of these agents in the past. The efficacy of GFPA modulators has been demonstrated in animal models in a number of CNS disorders, including major depressive disorder, neuropathic pain,

schizophrenia, anxiety, Alzheimer's disease and other cognition disorders. In these studies, GFPA modulators did not exhibit the schizophrenia-like side effects associated with NMDA receptor blockers that interact with other binding sites on the receptor complex. In preclinical studies, GLYX-13 has demonstrated a wide therapeutic ratio ( $\geq 500:1$ ) between efficacy and side effects, which is the largest therapeutic ratio of any reported molecule that interacts at the NMDA receptor. Preclinical studies also showed that the antidepressant effects of GLYX-13 were evident within 20 minutes and demonstrated an antidepressant effect lasting at least four days after administration of a single dose. In these studies, GLYX-13 affected both positive and negative symptoms of depression-like states in animals.<sup>1</sup>

### **About NMDA Receptor Modulators and Depression**

The glutamate receptor subtype known as NMDA (N-methyl-D-aspartic acid) plays a central role in modulating aspects of brain activity. Major pharmaceutical firms have been developing NMDA receptor modulators for more than 20 years, and a few, including Memantine<sup>®</sup>, ketamine, D-cycloserine, and dextromethorphan are on the market, generating annual sales of more than \$1 billion. The antidepressant potential of modulating the NMDA receptor has been confirmed by data from clinical studies with known NMDA receptor antagonists, which produced reductions in depression scores in patients with treatment-resistant depression. The efficacy in these studies was significant, with response rates of greater than 50%, fast onset of action within hours of a single dose and a long duration of effect after a single dose. These data have confirmed the NMDA receptor as a novel target of high interest in depression – representing a potentially entirely new way to treat patients who do not respond to current therapies.<sup>2,3</sup> But the known NMDA receptor drugs are also associated with significant toxicities at doses very close to the therapeutic dose.<sup>4,5</sup> These side effects include schizophrenia-like effects, sedation, and abuse and addiction potential, best illustrated by ketamine's notoriety as a drug of abuse. Until now, the narrow margin between therapeutic effects and adverse effects has limited the therapeutic potential of these agents. In studies to date, Naurex's novel NMDA receptor glycine site functional partial agonists have shown the significant therapeutic efficacy of other NMDA receptor modulators without their limiting side effects.

### **About Naurex**

Naurex, Inc. is a private company developing novel therapies for depression and other CNS disorders based on the work of founder Dr. Joseph R. Moskal and colleagues who discovered a new mechanism of action for modulating the NMDA receptor. Naurex has used these discoveries to generate novel chemical drug classes known as glycine site functional partial agonists (GFPAs). Naurex's first GFPA NMDA modulator, GLYX-13, has shown promising signs of antidepressant activity with excellent safety in preclinical studies. These safety results have now been confirmed in a Phase I clinical trial, and preparations for a Phase II evaluation as adjunctive therapy in patients who have failed first-line treatment are underway. Naurex also has a second-generation series of GFPA modulators that is advancing rapidly in preclinical development. Naurex has patented these novel chemistry classes and key molecular features that may represent a new platform for modulating NMDA receptors in a novel way. For more information, visit [www.naurex.com](http://www.naurex.com).

<sup>1</sup> Moskal J, Burgdorf J, The anti-depressant and anxiolytic properties of GLYX-13: a Glycine-site Functional Partial Agonist (GFPA), a novel mechanism for modulating NMDA receptors. Presented at the 2009 Annual Meeting of the American College of Neuropsychopharmacology.

<sup>2</sup> Zarate CA Jr, Singh JB, Carlson PJ, Brutsche NE, Ameli R, Luckenbaugh DA, Charney DS, Manji HK, A randomized trial of an N-methyl-D-aspartate antagonist in treatment-resistant major depression, *Arch Gen Psychiatry*. 2006; 63:856-64.

<sup>3</sup> Preskorn SH, Baker B, Kolluri S, Menniti FS, Krams M, Landen JW, An innovative design to establish proof of concept of the antidepressant effects of the NR2B subunit selective N-methyl-D-aspartate antagonist, CP-101,606, in patients with treatment-refractory major depressive disorder., *J Clin Psychopharmacol*. 2008 Dec; 28 (6):631-7.

<sup>4</sup> Skolnick P, Popik P, Trullas R., Glutamate-based antidepressants: 20 years on, *Trends Pharmacol Sci*. 2009 Nov; 30 (11):563-9.

<sup>5</sup> Machado-Vieira R, Salvadore G, Luckenbaugh DA, Manji HK, Zarate CA Jr., Rapid onset of antidepressant action: a new paradigm in the research and treatment of major depressive disorder., *J Clin Psychiatry*. 2008 Jun; 69 (6):946-58.