Naurex's GLYX-13 Demonstrates Robust, Sustained Antidepressant Effects and Excellent Tolerability in Phase 2b Study

Positive Clinical Data Presented at Annual Meeting of American College of Neuropsychopharmacology Support Start of Phase 3 Trial in 2015

Validates Therapeutic Potential of Naurex's New Class of Agents That Mobilize Novel Pathways in the Brain to Treat Depression and Other CNS Disorders

PHOENIX, Ariz., December 10, 2014 – Naurex Inc. today announced that Phase 2b data presented at the Annual Meeting of the American College of Neuropsychopharmacology demonstrated that repeat-dose adjunctive treatment with GLYX-13, a novel NMDA receptor modulator, resulted in robust and sustained antidepressant effects in subjects with inadequate responses to their current antidepressants. GLYX-13 was well-tolerated with no drug-related serious adverse events reported, including no sign of the psychotomimetic, or psychosis-like, effects associated with NMDA receptor antagonists such as ketamine. These new data confirm the efficacy and safety results from an earlier Phase 2 single-dose study of GLYX-13, which also documented the drug's rapid onset of antidepressant activity in as little as two hours.

Unlike most currently approved antidepressants, which act on serotonin and related neurotransmitter pathways in the brain, GLYX-13 works through an entirely different mechanism, mobilizing glutamate pathways to enhance neuronal plasticity and improve the communication between neuronal cells. Dysfunction in these activities is increasingly recognized by scientists as an important contributor to depression and other serious disorders of the central nervous system (CNS).

"Currently marketed antidepressants all work via similar pathways in the brain and do not adequately treat 45 percent of individuals with major depression. This presents a huge problem," said Sheldon Preskorn, M.D., a study investigator and professor of psychiatry at the University of Kansas School of Medicine-Wichita. "However, there are now several studies showing that many of these patients respond to investigational antidepressants, such as GLYX-13, that appear to work via a different mechanism, the NMDA receptor. These Phase 2b data are especially encouraging because repeated treatments with GLYX-13 produce a sustained response in patients who inadequately respond to marketed antidepressants. These results are of great clinical importance."

Norbert Riedel, Ph.D., president and chief executive officer of Naurex, commented, "The inadequacies of existing therapies have increased interest in the antidepressant properties of NMDA receptor antagonists like ketamine, but the serious side effects of these drugs limit their practical utility. After evaluating GLYX-13 in over 500 subjects to date, we believe our novel mechanism has achieved the right balance in selectively modulating the NMDA receptor to achieve the speed and efficacy of the NMDA receptor antagonists, but without the side effects."

Dr. Riedel continued, "We have discussed the wealth of GLYX-13 data with the FDA and have a clear understanding of the Phase 3 trial design needed to file a New Drug Application and ultimately offer this potentially important new therapy to the millions of patients who are poorly served by current treatments."

GLYX-13 Phase 2b Study Design

The GLYX-13 Phase 2b study was divided into three parts: a six-week adaptive-dose treatment stabilization period, followed by a six-week randomized withdrawal period and a four-week wash-out period. The study was designed to evaluate safety and efficacy with repeat dosing and to determine optimal dose (5 mg/kg or 10 mg/kg) and dose intervals (weekly or bi-weekly). Subjects were evaluated for changes in depressive symptoms on a weekly basis by off-site independent raters using the HDRS-17 scale. Both subjects and evaluators were blind to the study design.

All 386 subjects were dosed with an intravenous bolus injection of GLYX-13 at the beginning of the treatment stabilization period. Subjects received weekly injections of drug until a response was established (reduction in HDRS-17 to a score less than or equal to 50 percent of pre-dose baseline). Upon achieving response, subjects were then dosed with weekly intravenous injections of placebo to force a relapse in depressive symptoms (increase in HDRS-17 to a score greater than 50 percent of pre-dose baseline). Upon relapse, subjects were again dosed with GLYX-13 to evaluate whether efficacy could be reestablished. This cycle was repeated with weekly doses of either GLYX-13 or placebo for six weeks. On average, subjects received four injections of GLYX-13 and two injections of placebo during this period. This forced relapse component of the design allowed for evaluation of optimal dose interval, the ability of GLYX-13 to reestablish efficacy if the drug were discontinued, and the antidepressant effects of both drug and placebo in each subject.

Subjects who did not respond during the stabilization period were excluded prior to the randomized withdrawal period. During this six-week withdrawal period, subjects were randomized to continue receiving GLYX-13 or to have the drug withdrawn and replaced with placebo. During the following four-week washout period, all subjects received injections of placebo.

HDRS-17 is a commonly used instrument that monitors changes in subjects' responses on a number of depressive symptoms such as depressed mode, insomnia, somatic symptoms and difficulty in day-to-day work and activities. The HDRS-17 depression assessment scale was administered to subjects by off-site independent raters.

GLYX-13 Demonstrates Ability to Induce and Reestablish Antidepressant Effect

Overall, GLYX-13 was substantially more effective than placebo in alleviating symptoms of depression, it was able to again alleviate symptoms after a forced relapse, and its efficacy in reducing symptoms of depression increased over the course of the treatment period.

Responders demonstrated a significant difference between responses to drug versus placebo during the treatment stabilization period, showing an average 2.8 point **decrease** in HDRS-17 scores (improvement of depressive symptoms) in the week after receiving GLYX-13 and an average 3.1 point **increase** in HDRS-17 scores (worsening of depressive symptoms) in the week after receiving placebo (p-value = 0.03).

During the treatment stabilization period, reductions in depression scores were compounded incrementally with each dose of GLYX-13. For subjects responding to GLYX-13, the first dose of GLYX-13 resulted in an average reduction in HDRS-17 scores of 4.9 points from baseline; this effect increased to a cumulative average reduction in HDRS-17 scores of 12.5 points from baseline by the end of the six-week stabilization period.

GLYX-13 Was Well-Tolerated with Durable Antidepressant Effects

GLYX-13 was found to be well-tolerated throughout the study, with no drug-related serious adverse events and no subjects discontinuing treatment due to drug-related adverse events.

A previous Phase 2a study demonstrated that the antidepressant effects of GLYX-13 lasted for an average of seven days after a single dose; the Phase 2b study data demonstrated that this durable effect continues to build with repeat doses. Subjects treated with GLYX-13 during the initial six-week treatment stabilization period, and then randomized to receive placebo injections, continued to show effects of the GLYX-13 treatment throughout the following six-week withdrawal period and the subsequent four-week washout period – never returning toward the baseline HDRS-17 score over the entire post-treatment period. Durability of effect was also seen in the subjects who were randomized to continue GLYX-13 treatment during the withdrawal period.

Previous Phase 2a Study Established Rapid Onset of Action

In the Phase 2a study, a significant reduction in depressive symptoms was seen in as little as two hours following a single injection of GLYX-13 in subjects who had failed treatment with one or more antidepressant agents. The effect persisted for an average of seven days. The effect size, a measure of the magnitude of the drug's antidepressant efficacy, observed at 24 hours and at seven days after a single administration of GLYX-13, was nearly double the effect size seen with most other antidepressant drugs after four to six weeks of repeated dosing.

GLYX-13 to Advance to Phase 3 in 2015

Naurex has completed an end-of-Phase 2 meeting with FDA and is proceeding with its Phase 3 program, expected to begin in 2015.

Naurex recently completed an $80 million Series C financing to continue development of GLYX-13 and its next-generation, orally available NMDA receptor modulator NRX-1074, which is completing a Phase 2 study in major depressive disorder. The financing will also support advancement of the company's preclinical NMDA receptor modulators for other CNS indications.

Naurex's proprietary drug discovery platform is based on the pioneering work of company founder Joseph Moskal, Ph.D. and his colleagues at the Falk Center for Molecular Therapeutics at Northwestern University. Naurex retains exclusive worldwide development and commercialization rights for the discovery platform and all resulting molecules.

About Naurex Inc.

Naurex is a clinical stage biopharmaceutical company developing transformative therapies for challenging disorders of the central nervous system. The company has built a platform for discovering drugs that enhance synaptic plasticity, or strengthen the network for neural cell communication. Molecules discovered by Naurex achieve this through a novel mechanism that modulates the NMDA receptor – rather than shutting it down – resulting in drugs that are both highly effective and well tolerated. Naurex's lead molecule, GLYX-13, has demonstrated rapid, robust, and sustained efficacy in multiple Phase 2 clinical studies in depression, an area of high unmet need that has seen little innovation in decades. NRX-1074, a next-generation, orally bioavailable drug candidate, is in Phase 2 clinical development in depression. Naurex's platform has yielded a rich pipeline of subtype-selective NMDA receptor modulators with the potential to treat a broad set of psychiatric and neurologic disorders.

###

Media Contacts:
Canale Communications
Ian Stone
ian@canalecomm.com

619-849-5388

Naurex Inc.
Ashish Khanna
Vice President, Corporate Development
corporate@naurex.com
847-871-0377