Centrexion Therapeutics Announces Highly Statistically Significant Topline Results from Phase 2b Study of CNTX-4975 in Patients with Knee Osteoarthritis Pain

Non-opioid CNTX-4975 Met Primary Endpoint and All Secondary Endpoints
Largest Clinically-Relevant Reductions Seen in Knee Osteoarthritis Pain
Pain Relief Occurred within Days, Lasted At Least Six Months from Single Injection

Boston – December 13, 2016 – Centrexion Therapeutics, a company focused on advancing the treatment of chronic pain with one of the largest exclusively pain-focused pipelines of non-opioid therapies in active development, today announced positive topline data from its Phase 2b study of CNTX-4975 in patients with knee osteoarthritis (OA) pain.

In the randomized, double-blind, placebo-controlled, multicenter TRIUMPH study, CNTX-4975, Centrexion's proprietary lead pipeline candidate, met its primary endpoint of a reduction in pain with walking through 12 weeks with high statistical significance and demonstrated a duration of effect of at least 24 weeks after a single dose. At the 1.0 mg dose, two-thirds of patients achieved 50 percent or greater reduction in pain and nearly one-quarter of patients achieved a 90 percent or greater reduction in pain.

"As our population ages, chronic osteoarthritis pain is an important and growing problem. Short of joint replacement which carries risks associated with any surgery, there are insufficient options and severe osteoarthritis pain is one of the most common reasons patients take opioids," commented Nathaniel Katz M.D., M.S., adjunct associate professor of anesthesia at Tufts University School of Medicine. "It is critical to develop effective non-opioid therapies that can avoid the abuse and addiction issues associated with opioid treatments and CNTX-4975 represents an important new approach for pain relief for patients. The results seen in this clinical trial suggest that the medicine warrants further clinical investigation."

"These Phase 2b data show the largest clinically-relevant reductions in knee osteoarthritis pain reported for any drug treatment, marketed or in development. They demonstrate that CNTX-4975 has the potential to provide a non-opioid and non-surgical approach to osteoarthritis pain relief that would allow patients to return to daily activities, such as walking up stairs, that were previously too painful," said Randall M. Stevens, M.D., chief medical officer for Centrexion Therapeutics. "We are very encouraged by the extent and duration of pain relief treatment seen with CNTX-4975, particularly at the 1.0 mg dose. We look forward to discussing these results with the FDA and initiating Phase 3 development of CNTX-4975 next year."

Design and Topline Results of Phase 2b Study
The dose-ranging Phase 2b study evaluated the safety and efficacy of CNTX-4975 in 175 patients with chronic moderate to severe knee OA pain over 24 weeks. Patients were randomized to receive either a single injection into the knee of CNTX-4975 0.5 mg (n=34), CNTX-4975 1.0 mg (n=71) or placebo (n=70). The primary endpoint was pain with walking (WOMAC [Western Ontario and McMaster Universities Arthritis Index] A1) at Week 12.

Secondary outcome measures included knee joint stiffness and function (both assessed by WOMAC B and WOMAC C, respectively), patient global impression of change (PGIC), responder analysis (the proportion of patients improved by percent from baseline pain), and safety and tolerability. Additional follow-up to 24 weeks was conducted to assess the duration of response from a single injection.

Topline results showed that, through 12 weeks:

- Both doses of CNTX-4975 were significantly more effective than placebo in the primary endpoint of pain with walking. For the 1.0 mg dose:
    - Both weekly pain and daily pain measures were highly statistically significant ($p<0.001$)
    - Twenty-two percent of patients achieved a 90 percent or greater reduction in pain and 67 percent of patients achieved 50 percent or greater reduction in pain
    - CNTX-4975 was significantly more effective than placebo in the secondary outcome measures of stiffness, function and PGIC at every time point
    - The onset of pain reduction occurred within days and reached statistical significance at Week 1
    - Maximum effect was seen at Week 5 and a stable, statistically significant response at every time point was observed through Week 12

Topline results showed that, through 24 weeks for the 1.0 mg dose:

- The study met the endpoint of duration of response with statistical significance with a single dose of CNTX-4975 compared to placebo

Safety results showed that the Day 1 injection of CNTX-4975 was generally well tolerated. Adverse events were similar to those seen with placebo and there were no drug-related serious adverse events. Laboratory abnormalities were few, generally mild, and associated with comorbid conditions or random fluctuations

Jeffrey B. Kindler, chief executive officer of Centrexion Therapeutics, added, “With these positive data in hand, the recent Fast Track designation for CNTX-4975 in Morton’s neuroma, and our acquisition of three novel pain treatment programs earlier this year, we are advancing a robust and diverse pipeline of non-opioid, chronic pain therapies that have the potential to bridge the safety and efficacy gaps in current chronic pain management.”

Centrexion plans to present the full study results at an upcoming medical conference.

About CNTX-4975

CNTX-4975 is based on Centrexion’s proprietary STRATI® technology (**S**ynthetic **TR**ans c**A**psaicin ul**T**ra-pure **I**njection), a highly potent, ultrapure, synthetic form of trans-capsaicin (a medicine traditionally derived from the chili plant). CNTX-4975 is designed to be injected directly into the site of pain to provide rapid onset, large reduction and long duration of relief from moderate to severe pain without affecting touch sensibility or position sense.

CNTX-4975 works by selectively targeting the capsaicin receptor (TRPV1) to rapidly inactivate only the local pain fibers transmitting signals to the brain. With a short half-life, STRATI® is cleared from the body within 24 hours. This approach provides pain relief that can last for months until the ends of the local pain fibers regenerate, while leaving the rest of the nerve fiber functioning as normal, and without the risks of toxicities of NSAIDs and injected steroids or the side effects, including abuse and addiction, associated with opioid treatments.

In addition to the ongoing open-label, multiple-dose extension trial in patients with Morton's neuroma pain, CNTX-4975 is currently being evaluated in a Phase 2b study for the treatment of chronic moderate to severe pain from knee osteoarthritis (OA) in humans and in a double-blind trial in pet dogs with OA.

About Osteoarthritis

Osteoarthritis (OA) is the most common form of arthritis, affecting approximately 14 million people in the United States.[1] It occurs when the protective cartilage on the ends of the bones wears down over time, and the bone around the joints harden and form edges. These changes cause pain, swelling and problems moving the joint. OA also causes an inflammatory process to occur in the affected joint, further damaging the cartilage. Although OA can damage the majority of joints in the body, it most commonly affects joints in the hands, knees, hips and spine. OA can cause pain severe enough that patients experience difficulty walking, climbing stairs or even rising from a chair. Despite currently available therapies, many patients opt for total joint replacement to manage the painful condition.

About Centrexion Therapeutics

Centrexion Therapeutics, Corp. is focused on advancing the treatment of chronic moderate to severe pain with one of the largest exclusively pain-focused pipelines of non-opioid therapies in active development. Centrexion Therapeutics recognizes the needs of over a quarter of a billion patients living with chronic pain worldwide, and aims to develop new, safer and more effective therapies that overcome the limitations and challenges associated with current pain treatments. Founded by world-renowned leaders in drug development and well-funded by key investors, Centrexion Therapeutics is building a pain treatment powerhouse to address the substantial and growing global chronic pain epidemic. Centrexion Therapeutics has recently relocated from Baltimore, Md. to Boston, Mass.

For more information about Centrexion, visit http://www.centrexion.com.

1. Deshpande, B., et al. Number of Persons With Symptomatic Knee Osteoarthritis in the US: Impact of Race and Ethnicity, Age, Sex, and Obesity. *Arthritis Care & Research*. Published online November 3, 2016

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