



Centrexion Therapeutics Announces New 6-Month Data Demonstrating Significant and Durable Pain Relief with CNTX-4975 for Treatment of Moderate to Severe Knee Osteoarthritis Pain

-- Single Injection Significantly Improved Pain with Walking, Knee Stiffness and Physical Function; Showed Improvement through Six Months in Phase 2b Trial --

-- Data Represent the Largest Reductions Seen in Knee Osteoarthritis Pain Reported for Any Drug Treatment --

BOSTON, Mass., June 13, 2017 – Centrexion Therapeutics, a company focused on advancing the treatment of chronic pain with one of the largest exclusively pain-focused clinical pipeline of non-opioid therapies in active development, today announced positive 6-month efficacy data from the Phase 2b TRIUMPH clinical trial demonstrating durable response of CNTX-4975 for treatment of chronic pain associated with knee osteoarthritis. The data are being presented in an invited presentation at the European League Against Rheumatism’s Annual European Congress of Rheumatology (EULAR 2017) in Madrid this week.

The new data show large and statistically significant pain relief continuing through 24 weeks from a single 1 mg injection of CNTX-4975 ($p=0.0002$), as well as statistically and clinically significant improved knee stiffness and physical function during the trial in patients with moderate to severe knee osteoarthritis pain. Treatment with CNTX-4975 resulted in large levels of pain reduction compared to baseline and statistical separation from placebo beginning at Week 1. These data represent the largest reductions seen in knee osteoarthritis reported for any drug treatment, marketed or in development. Additionally, safety results continue to show that CNTX-4975 is well tolerated with a safety profile similar to placebo.

“These impressive and robust 6-month data demonstrate the potential of CNTX-4975 to be a long-lasting and efficacious treatment. Not only are we seeing an onset of pain reduction in days, treatment with CNTX-4975 resulted in much larger pain reductions than has been seen with other pain therapeutics in knee osteoarthritis and we are seeing this response endure for six months,” said Randall M. Stevens, M.D., chief medical officer of Centrexion Therapeutics. “Importantly, in the context of treating a chronic condition, we are seeing these exciting efficacy responses with a safety profile that looks like placebo.”

“Chronic pain, particularly knee osteoarthritis, is a growing problem, not only creating a burden on our healthcare system but also having a significant negative impact on lives of people living with pain,” said Philip Mease, M.D., clinical professor at the University of Washington School of Medicine in Seattle, director of the Rheumatology Clinical Research Division of Swedish Medical Center. “There is an urgent need for new safe and effective treatments without running the risks of abuse and addiction associated with opioid use or damaging side effects seen with other pain treatments. CNTX-4975 has demonstrated remarkable results in a difficult to treat population and shows promise as a new approach for treating knee osteoarthritis pain.”

TRIUMPH Phase 2b Clinical Trial Results and Design



The dose-ranging 24 week Phase 2b study evaluated the safety and efficacy of a single intra-articular injection (injected into the knee joint) of CNTX-4975 in subjects aged 45-80 years with chronic knee osteoarthritis, who had stable moderate to severe knee pain, radiographic damage from moderate to severe, and had failed or were unable to tolerate existing oral or intra-articular analgesics. The 175 patients were randomized to receive either a single injection into the knee of CNTX-4975 0.5 mg (n=34), CNTX-4975 1 mg (n=71) or placebo (n=70).

Primary and Secondary Endpoints Met at 12 Weeks

At 12 weeks, the study showed that treatment with a single 1 mg dose of CNTX-4975 resulted in significant and clinically meaningful improvements in primary and secondary outcome measures. The 12 week primary endpoint of the study, pain with walking (WOMAC [Western Ontario and McMaster Universities Arthritis Index] question A1), was met with high statistical significance (p<0.0001). Significant improvements in pain with walking were observed in subjects who were predominately obese (BMI≥30kg/m²) and had K-L grades 2-4. Additional outcome measures at week 12 were all statistically and clinically significant, including knee joint stiffness and function (assessed by WOMAC B and WOMAC C, respectively), patient global impression of change (PGIC), and responder analysis (the proportion of patients improved by percent from baseline pain).

Efficacy Endpoints Met At 24 Weeks

In order to determine the duration of effect from a single injection of CNTX-4975, patients were then followed under double blind, placebo control from the 12 week timepoint out to 24 weeks. At 24 weeks post injection, patients treated with the 1 mg dose continued to show a large and statistically significant level of pain relief compared to placebo as well improved knee stiffness and physical function.

Assessment	Week 12			Week 24		
	Decrease from Baseline	Difference vs. Placebo	P value	Decrease from Baseline	Difference vs. Placebo	P value
Daily Pain with Walking (measured by AUC)	-3.9	-1.6	P<0.0001	-3.8	-1.3	P=0.0002
Daily Pain with Walking (measured by MMRM)	-4.4	-1.5	P=0.0003	-3.8	-0.9	P=0.067*

* Statistical significance prespecified at 0.1

AUC: area under curve; MMRM: mixed model for repeated measures

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 and similar between placebo and CNTX-4975.

“With these positive data and the successful End of Phase 2 meetings with the FDA and the European authorities that we had earlier this year, we look forward to advancing the development of CNTX-4975 with the initiation of a Phase 3 trial for the treatment of



chronic moderate to severe knee osteoarthritis pain later this year,” said Jeffrey B. Kindler, chief executive officer of Centrexion Therapeutics.

Presentation Details

The data are being presented in an invited presentation at the European League Against Rheumatism’s Annual European Congress of Rheumatology (EULAR 2017) in Madrid this week:

Title (OPO167): Efficacy And Safety Of CNTX-4975 in Subjects with Moderate To Severe Osteoarthritis Knee Pain: 24-Week, Randomized, Double-Blind, Placebo-Controlled, Dose-Ranging Study

Session: Osteoarthritis: new horizons for treatment

Presentation Time: 10:50 a.m. CEST, June 15, 2017

Location: Room N117 / N118

About CNTX-4975

CNTX-4975 is based on Centrexion’s proprietary STRATI® technology (**S**ynthetic **T**Rans **c**Apsaicin **u**ltra-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 targeting the capsaicin receptor (TRPV1) to selectively and rapidly inactivate only the local pain fibers transmitting signals to the brain. With a short half-life, CNTX-4975 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 maintaining normal sensation, such as touch, pressure and position, and without the risks of toxicities of NSAIDs and injected corticosteroids or the side effects, including abuse and addiction, associated with opioid treatments.

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 knees, hips, hands 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, non-addictive therapies in active development. Centrexion Therapeutics recognizes the needs of over a quarter of a billion people 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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