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Unicycive Therapeutics Announces Publication of Oxylanthanum Carbonate (OLC) Positive Bioequivalence Data in Clinical Therapeutics

LOS ALTOS, Calif., Dec. 17, 2024 (GLOBE NEWSWIRE) -- Unicycive Therapeutics, Inc. (Nasdaq: UNCY), a clinical-stage biotechnology company developing therapies for patients with kidney disease (the “Company” or “Unicycive”), today announced that data from the Company’s oxylanthanum carbonate (OLC) bioequivalence study in healthy volunteers was published in the peer-reviewed journal, *Clinical Therapeutics*.

The publication, entitled, “Two-Way Randomized Crossover Study to Establish Pharmacodynamic Bioequivalence Between Oxylanthanum Carbonate and Lanthanum Carbonate” described the study that established pharmacodynamic (PD) bioequivalence of OLC to Fosrenol®. In the study, OLC was well tolerated and demonstrated bioequivalence to lanthanum carbonate (LC).

“Demonstrating bioequivalence was a key component of our OLC New Drug Application, and we are pleased that these positive data have been published in the peer-reviewed journal, *Clinical Therapeutics*,” said, Shalabh Gupta, MD, Chief Executive Officer of Unicycive. “With our NDA now under review, we are preparing for commercial launch of OLC in 2025.”

Phosphate binders are integral to hyperphosphatemia management in patients with end-stage kidney disease. This objective of the Unicycive study was to demonstrate the pharmacodynamic equivalence of orally administered OLC to LC in healthy participants. A total of 80 participants were randomized and 75 received all doses. Participants were treated with OLC swallowable 1000 mg tablets three times/day and LC chewable 1000 mg tablets three times/day in a two-way crossover design. The primary pharmacodynamic variable was the least squares mean (LSM) change in urinary phosphate excretion from baseline to the evaluation period (Days 1–4 of treatment). The LSM change in urinary phosphate excretion from Baseline to the Evaluation (Treatment) Period was similar for both OLC (–320.4 mg/day [90% CI: –349.7, –291.0]) and LC (–324.0 mg/day [90% CI: –353.3, –294.7]); the between-group LSM difference was 3.6 [90% CI: –37.8, 45.1] mg/day. Both drugs were well tolerated with an equal incidence of adverse events.

The full publication can be accessed [here](#).

About Oxylanthanum Carbonate (OLC)

Oxylanthanum carbonate is a next-generation lanthanum-based phosphate binding agent utilizing proprietary nanoparticle technology being developed for the treatment of hyperphosphatemia in patients with chronic kidney disease (CKD). OLC has over forty

issued and granted patents globally. Its potential best-in-class profile may have meaningful patient adherence benefits over currently available treatment options as it requires a lower pill burden for patients in terms of number and size of pills per dose that are swallowed instead of chewed. Based on a survey conducted in 2022, Nephrologists stated that the greatest unmet need in the treatment of hyperphosphatemia with phosphate binders is a lower pill burden and better patient compliance.¹ The global market opportunity for treating hyperphosphatemia is projected to be in excess of \$2.28 billion, with the North America accounting for more than \$1 billion of that total.² Despite the availability of several FDA-cleared medications, 75 percent of U.S. dialysis patients fail to achieve the target phosphorus levels recommended by published medical guidelines.³

Unicycive is seeking FDA approval of OLC via the 505(b)(2) regulatory pathway. The NDA submission package is based on data from three clinical studies (a Phase 1 study in healthy volunteers, a bioequivalence study in healthy volunteers, and a tolerability study of OLC in CKD patients on dialysis), multiple preclinical studies, and the chemistry, manufacturing and controls (CMC) data. OLC is protected by a strong global patent portfolio including issued patents on composition of matter with exclusivity until 2031, and with the potential for patent term extension until 2035.

About Hyperphosphatemia

Hyperphosphatemia is a serious medical condition that occurs in nearly all patients with End Stage Renal Disease (ESRD). If left untreated, hyperphosphatemia leads to secondary hyperparathyroidism (SHPT), which then results in renal osteodystrophy (a condition similar to osteoporosis and associated with significant bone disease, fractures and bone pain); cardiovascular disease with associated hardening of arteries and atherosclerosis (due to deposition of excess calcium-phosphorus complexes in soft tissue). Importantly, hyperphosphatemia is independently associated with increased mortality for patients with chronic kidney disease on dialysis. Based on available clinical data to date, over 80% of patients show signs of cardiovascular calcification by the time they become dependent on dialysis.⁴

Dialysis patients are already at an increased risk for cardiovascular disease (because of underlying diseases such as diabetes and hypertension), and hyperphosphatemia further exacerbates this. Treatment of hyperphosphatemia is aimed at lowering serum phosphate levels via two means: (1) restricting dietary phosphorus intake; and (2) using, on a daily basis, and with each meal, oral phosphate binding drugs that facilitate fecal elimination of dietary phosphate rather than its absorption from the gastrointestinal tract into the bloodstream.

About Unicycive Therapeutics

Unicycive Therapeutics is a biotechnology company developing novel treatments for kidney diseases. Unicycive's lead drug candidate, oxylanthanum carbonate (OLC), is a novel investigational phosphate binding agent being developed for the treatment of hyperphosphatemia in chronic kidney disease patients on dialysis. Positive pivotal trial results were reported in June 2024 for OLC, and a New Drug Application (NDA) is under review by the U.S. Food and Drug Administration (FDA) with a Prescription Drug User Fee Act (PDUFA) Target Action Date of June 28, 2025. OLC is protected by a strong global

patent portfolio including an issued patent on composition of matter with exclusivity until 2031, and with the potential patent term extension until 2035 after OLC approval. Unicycive's second asset, UNI-494, is a patent-protected new chemical entity in clinical development for the treatment of conditions related to acute kidney injury. UNI-494 has successfully completed a Phase 1 trial. For more information, please visit [Unicycive.com](https://www.unicycive.com) and follow us on [LinkedIn](#), [X](#), and [YouTube](#).

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 using words such as "anticipate," "believe," "forecast," "estimated" and "intend" or other similar terms or expressions that concern Unicycive's expectations, strategy, plans or intentions. These forward-looking statements are based on Unicycive's current expectations and actual results could differ materially. There are several 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, clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results; our clinical trials may be suspended or discontinued due to unexpected side effects or other safety risks that could preclude approval of our product candidates; risks related to business interruptions, which could seriously harm our financial condition and increase our costs and expenses; dependence on key personnel; substantial competition; uncertainties of patent protection and litigation; dependence upon third parties; and risks related to failure to obtain FDA clearances or approvals and noncompliance with FDA regulations. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the uncertainties related to market conditions and other factors described more fully in the section entitled 'Risk Factors' in Unicycive's Annual Report on Form 10-K for the year ended December 31, 2023, and other periodic reports filed with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Unicycive specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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¹Reason Research, LLC 2022 survey. Results [here](#).

²Fortune Business InsightsTM, Hyperphosphatemia Treatment Market, 2023-2030

³US-DOPPS Practice Monitor, May 2021; <http://www.dopps.org/DPM>

⁴Block GA, Klassen PS, Lazarus JM, Ofsthun N, Lowrie EG, Chertow GM. Mineral metabolism, mortality, and morbidity in maintenance hemodialysis. J Am Soc Nephrol. 2004 Aug;15(8):2208-18. doi: 10.1097/01.ASN.0000133041.27682.A2. PMID: 15284307.

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