Tilray Medical Publishes Pioneering Research on the Pharmacokinetics of THC and CBD Formulations

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New Study Provides Insight into the Bioavailability of Medical Cannabis Formulations for Therapeutic Treatment

NEW YORK, June 26, 2025 (GLOBE NEWSWIRE) -- Tilray Medical, a division of Tilray Brands, Inc. ("Tilray" or the "Company") (Nasdaq: TLRY; TSX: TLRY) and a global leader in medical cannabis, empowering the therapeutic alliance between patients and healthcare practitioners to make informed individualized health decisions, today announced the publication of a scientific study. This new research focuses on comparing the bioavailability of different cannabinoid formulations, taking a step forward in our understanding of medical cannabis.

The study aimed to assess the pharmacokinetic parameters and relative bioavailability of two D9-tetrahydrocannabinol: cannabidiol (THC:CBD) formulations. (A) An orally administered: Tilray THC:CBD extract and (B) an oromucosally administered nabiximols formulation. This pilot crossover study counterbalanced (1) 1 mL of orally administered Tilray THC:CBD extract (10 mg/mL each of THC and CBD) and (2) oromucosally administered nabiximols (four sprays of 2.7 mg THC and 2.5 mg CBD per spray, for a total dose of 10.8 mg THC and 10 mg CBD). Blood samples were obtained pre-dose and at 16 post-dose time points over 24 hours. Pharmacokinetic parameters were calculated for THC, 11-hydroxy-tetrahydrocannabinol (11-OH-THC), and CBD.

Conducted with twelve healthy volunteers (6 male, 6 female) under fasting conditions, the results revealed that the Cmax for THC and CBD was significantly higher for the Tilray THC:CBD extract compared to nabiximols and neither Tmax nor AUC was significantly different for the two treatments. Interestingly, the Cmax for nabiximols was significantly higher in males compared to females. Under both treatment conditions, THC and CBD were undetectable 24 hours post-dose, and 11-OH-THC was markedly reduced from its peak. Notably, no serious adverse events were reported.

This pilot study shows that oral administration of Tilray THC:CBD extract formulation achieved higher THC and CBD concentrations within a shorter timeframe compared to the oromucosal delivery of nabiximols. These findings may have significant implications for clinical populations using these formulations therapeutically.

José Tempero, Tilray's Medical Director, remarked, "By advancing our understanding of cannabinoid pharmacokinetics, we are better equipped to develop formulations that can significantly enhance therapeutic outcomes. We extend our heartfelt thanks to our partners in this study for their invaluable contributions and collaboration."

Denise Faltishchek, Chief Strategy Officer and Head of International at Tilray, added, "This pioneering research exemplifies our commitment to advancing the science of medical cannabis. By deepening our understanding of cannabinoid pharmacokinetics, we strive to enhance the therapeutic potential of our products, ultimately improving the quality of life for patients globally. Our goal is to continue driving innovation and providing patients with safe, effective, consistent and reliable medical cannabis solutions for patients around the world."

Tilray Medical is a leading provider of EU-GMP certified and pharmaceutical-grade medical cannabis products, having supplied over 20 countries with a comprehensive portfolio of THC and CBD products. Tilray has supported medical trials globally, across Europe, Canada, the United States, Australia, and Latin America, studying the efficacy of medical cannabis as a treatment for indications including pediatric epilepsy, refractory pediatric epilepsy, cancer-induced nausea and vomiting, HIV, essential tremor, breast cancer disorders, post-traumatic stress disorder, and alcohol use disorders.

About Tilray Medical

Tilray Medical is dedicated to transforming lives and fostering dignity for patients in need through safe and reliable access to a global portfolio of medical cannabis brands, including Tilray, Aphria, Broken Coast, Symbios and Navcora. Tilray grew from being one of the first companies to become an approved licensed producer of medical cannabis in Canada to building the first GMP-certified cannabis production facilities in Europe, first in Portugal and later in Germany. Today, Tilray Medical is one of the largest suppliers of medical cannabis, having supplied to patients, physicians, hospitals, pharmacies, researchers, and governments in over 20 countries and across five continents.

For more information on Tilray Medical, visit Tilray Medical Europe, Tilray Medical Canada, and Tilray Medical Australia-New Zealand.

About Tilray Brands

Tilray Brands, Inc. (“Tilray”) (Nasdaq: TLRY; TSX: TLRY), is a leading global lifestyle and consumer packaged goods company with operations in Canada, the United States, Europe, Australia, New Zealand and Latin America that is leading as a transformative force at the nexus of cannabis, beverage, wellness, and entertainment, elevating lives through moments of connection. Tilray’s mission is to be a leading premium lifestyle company with a house of brands and innovative products that inspire joy and create memorable experiences. Tilray’s unprecedented platform supports over 40 brands in over 20 countries, including comprehensive cannabis offerings, hemp-based foods, and craft beverages.

For more information on how we are elevating lives through moments of connection, visit Tilray.com and follow @Tilray on all social platforms.

Forward-Looking Statements

Certain statements in this communication that are not historical facts constitute forward-looking information or forward-looking statements (together, “forward-looking statements”) under Canadian securities laws and within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that are intended to be subject to the “safe harbor” created by those sections and other applicable laws. Forward-looking statements can be identified by words such as “forecast,” “future,” “should,” “could,” “enable,” “potential,” “contemplate,” “believe,” “anticipate,” “estimate,” “plan,” “expect,” “intend,” “may,” “project,” “will,” “would” and the negative of these terms or similar expressions, although not all forward-looking statements contain these identifying words. Certain material factors, estimates, goals, projections, or

assumptions were used in drawing the conclusions contained in the forward-looking statements throughout this communication. Forward-looking statements include statements regarding our intentions, beliefs, projections, outlook, analyses, or current expectations concerning, among other things, the Company's ability to commercialize new and innovative products worldwide. Many factors could cause actual results, performance, or achievement to be materially different from any forward-looking statements, and other risks and uncertainties not presently known to the Company or that the Company deems immaterial could also cause actual results or events to differ materially from those expressed in the forward-looking statements contained herein. For a more detailed discussion of these risks and other factors, see the most recently filed annual information form of Tilray and the Annual Report on Form 10-K (and other periodic reports filed with the SEC) of Tilray made with the SEC and available on EDGAR. The forward-looking statements included in this communication are made as of the date of this communication and the Company does not undertake any obligation to publicly update such forward-looking statements to reflect new information, subsequent events, or otherwise unless required by applicable securities laws.

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