July 30, 2024

180 Life Sciences Announces Positive Topline Results of a Clinical Pharmacology Study Testing a New Solid Formulation of CBD with Enhanced Oral Uptake

PALO ALTO, Calif., July 30, 2024 (GLOBE NEWSWIRE) -- PALO ALTO, Calif., July 30, 2024 (GLOBE NEWSWIRE) -- 180 Life Sciences Corp. (NASDAQ: ATNF) ("180 Life Sciences" or the "Company"), today announced topline results from a clinical pharmacology study (the "Study"), that evaluated the uptake of cannabidiol (CBD) in a solid formulation which can be delivered as a pill orally. The clinical trial in humans, performed with Prof. Avi Domb of the Hebrew University, School of Pharmacy, and with Prof. Elyad Davidson, of Hadassah Hospital, compared two solid formulations of CBD with a U.S. Food and Drug Administration (FDA) approved drug for epilepsy, Epidiolex. The purpose of the Study was to compare the pharmokinetic (PK) profile of a generic approved CBD product, Epidiolex®, with two solid formulations. We believe this type of trial has yet to be examined in a clinical setting. For the Company's trial, twelve volunteers received all three formulations in a crossover randomized trial.

Epidiolex is a CBD dissolved in 8% ethanol and 80% sesame seed oil, plus flavoring agents, that is given as a liquid solution via syringe in the mouth. Results of the clinical trial indicate that one of the two solid forms was absorbed faster and exhibited higher maximal levels compared to Epidiolex. Both of the solid formulations were well tolerated.

CBD is a purified product that is not psychoactive, which we believe has potential benefits for treatment of inflammatory processes and pain. A major problem in working with CBD is its low, unpredictable and variable uptake following the most convenient delivery form, by mouth, as a liquid CBD in oil like the approved pharmaceutical Epidiolex, given for epilepsy.

To help try to solve this problem, Prof. Domb and colleagues developed "ProNanoLipospheres" (PNL), a mixture of components available over-the-counter, which form little droplets and have been shown to be absorbed from the gastrointestinal tract into blood. The results of the clinical trial performed on 12 adult males at the Hadassah Hospital, shows that capsules composed of one of the PNL formulations performed better statistically than Epidiolex in terms of the speed of absorption and achievement of maximal levels. The other PNL formulation, also given as a capsule, was statistically equivalent to Epidiolex in terms of speed of absorption and achievement of maximal levels.

We believe that a solid formulation for testing in clinical trials will advance testing CBD in other indications. CBD has shown promise in studies on treatment of pain, post-traumatic stress disorder (PTSD), head trauma, and other indications, yet an oral liquid formulation is undesirable.[1] The new formulations tested by 180 Life Sciences and its collaborators open a potential path for testing solid CBD given by mouth in a capsule.

According to Prof. Avi Domb, “If shown via further clinical testing, 180 Life Sciences’ proprietary solid formulation for the delivery of CBD may provide medical professionals with greatly expanded options to prescribe and deliver CBD in a precisely dosed, high uptake pill format rather than the current liquid format. This may have potentially significant commercial market potential by avoiding the complexity associated with unpredictable liquid formulation delivery. Both physicians and patients may have broader acceptance of a solid oral pill format.”

Full study results are not yet available. The trial results are planned to be submitted for scientific publication at a later date. We do not anticipate the outcome of this trial to have any effect on our financial results for the year ended December 31, 2024.

About 180 Life Sciences Corp.

180 Life Sciences Corp. is a clinical stage biotechnology company focused on the development of therapeutics for unmet medical needs in chronic pain, inflammation and fibrosis by employing innovative research, and, where appropriate, combination therapy.

Forward-Looking Statements

This press release includes “forward-looking statements”, including information about management’s view of the Company’s future expectations, plans and prospects, within the safe harbor provisions provided under federal securities laws, including under The Private Securities Litigation Reform Act of 1995 (the “Act”). Words such as “expect,” “estimate,” “project,” “budget,” “forecast,” “anticipate,” “intend,” “plan,” “may,” “will,” “could,” “should,” “believes,” “predicts,” “potential,” “continue” and similar expressions are intended to identify such forward-looking statements. These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from the expected results and, consequently, you should not rely on these forward-looking statements as predictions of future events. These forward-looking statements and factors that may cause such differences include, without limitation, statements expressed or implied relating to the properties or potential benefits of PNL; our ability to commercialize PNL and our other drug candidates, if proven successful for treatment in trials; risks regarding whether the administrative processes required for the issuance of patents will be completed in a timely manner or at all; the Company’s ability to meet Nasdaq’s conditions for continued listing on Nasdaq, and the timing relating thereto; the ability of the Company to maintain the continued listing of the Company’s securities on The Nasdaq Stock Market, including that the Company is not currently in compliance with Nasdaq’s continued listing standards; the review and evaluation of strategic transactions and their impact on shareholder value; the process by which the Company engages in evaluation of strategic transactions; the outcome of potential future strategic transactions and the terms thereof; the ability of the Company to raise funding, the terms of such funding, and dilution caused thereby; risks regarding the outcome of pharmaceutical studies, the timing and costs thereof, and the ability to obtain sufficient participants; the timing of, outcome of, and results of, clinical trials statements regarding the timing of marketing authorization application (MAA) submissions to the UK Medicines and Healthcare products Regulatory Agency (MHRA) and New Drug Application submissions (NDA) to the U.S. Food and Drug Administration (FDA), our ability to obtain approval and acceptance thereof, the willingness of MHRA to review such MAA and the FDA to review such NDA, and our ability to address outstanding comments and questions from the MHRA and FDA; statements about the ability of our clinical trials to demonstrate safety

and efficacy of our product candidates, and other positive results; the uncertainties associated with the clinical development and regulatory approval of 180 Life Sciences' drug candidates, including potential delays in the enrollment and completion of clinical trials, the costs thereof, closures of such trials prior to enrolling sufficient participants in connection therewith, issues raised by the FDA, the MHRA and the European Medicines Agency (EMA); the ability of the Company to persuade regulators that chosen endpoints do not require further validation; timing and costs to complete required studies and trials, and timing to obtain governmental approvals; the accuracy of simulations and the ability to reproduce the outcome of such simulations in real world trials; 180 Life Sciences' reliance on third parties to conduct its clinical trials, enroll patients, and manufacture its preclinical and clinical drug supplies; the ability to come to mutually agreeable terms with such third parties and partners, and the terms of such agreements; estimates of patient populations for 180 Life Sciences planned products; 180 Life Sciences' ability to fully comply with numerous federal, state and local laws and regulatory requirements, as well as rules and regulations outside the United States, that apply to its product development activities; current negative operating cash flows and a need for additional funding to finance our operating plans; the terms of any further financing, which may be highly dilutive and may include onerous terms, increases in interest rates which may make borrowing more expensive and increased inflation which may negatively affect costs, expenses and returns; statements relating to expectations regarding future agreements relating to the supply of materials and license and commercialization of products; the availability and cost of materials required for trials; the risk that initial drug trials and results are not predictive of future results or will not be able to be replicated in clinical trials or that such drugs selected for clinical development will not be successful; challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; the inherent risks in early stage drug development including demonstrating efficacy; development time/cost and the regulatory approval process; the progress of our clinical trials; our ability to find and enter into agreements with potential partners; our ability to attract and retain key personnel; changing market and economic conditions; competition, including technological advances, new products and patents attained by competitors; challenges to patents; changes to applicable laws and regulations, including global health care reforms; expectations with respect to future performance, growth and anticipated acquisitions; expectations regarding the capitalization, resources and ownership structure of the Company; the ability of the Company to execute its plans to develop and market new drug products and the timing and costs of these development programs; estimates of the size of the markets for the Company's potential drug products; the outcome of current litigation involving the Company; potential future litigation involving the Company or the validity or enforceability of the intellectual property of the Company or lawsuits alleging that we have violated the intellectual property of others; global economic conditions; geopolitical events and regulatory changes; the expectations, development plans and anticipated timelines for the Company's drug candidates, pipeline and programs, including collaborations with third parties; and the effect of changing interest rates and inflation, economic downturns and recessions, declines in economic activity or global conflicts. These risk factors and others are included from time to time in documents the Company files with the Securities and Exchange Commission, including, but not limited to, its Form 10-Ks, Form 10-Qs and Form 8-Ks, and including the Annual Report on Form 10-K for the year ended December 31, 2023, and Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, and future SEC filings. These reports and filings are available at www.sec.gov and are available for download, free of charge, soon after such reports are filed with or furnished to the SEC, on

the “Investors”, “SEC Filings”, “All SEC Filings” page of our website at www.180lifesciences.com. All subsequent written and oral forward-looking statements concerning the Company, the results of the Company’s clinical trial results and studies or other matters and attributable to the Company or any person acting on its behalf are expressly qualified in their entirety by the cautionary statements above. Readers are cautioned not to place undue reliance upon any forward-looking statements, which speak only as of the date made, including the forward-looking statements included in this press release, which are made only as of the date hereof. The Company cannot guarantee future results, levels of activity, performance or achievements. Accordingly, you should not place undue reliance on these forward-looking statements. The Company does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement to reflect any change in its expectations or any change in events, conditions, or circumstances on which any such statement is based, except as otherwise provided by law.

Investors:

Please contact Blair Jordan, Interim CEO – bjordan@180lifesciences.com

[1] See, for example:

a. Izzo, A. A., Borrelli, F., Capasso, R., Di Marzo, V. & Mechoulam, R. Non-psychotropic plant cannabinoids: new therapeutic opportunities from an ancient herb. *Trends Pharmacol. Sci.* **30**, 515–527 (2009).
b. Hayakawa, K. *et al.* Therapeutic time window of cannabidiol treatment on delayed ischemic damage via high-mobility group box1-inhibiting mechanism. *Biol. Pharm. Bull.* **32**, 1538–44 (2009).
c. Chagas, M. H. N. *et al.* Cannabidiol can improve complex sleep-related behaviours associated with rapid eye movement sleep behaviour disorder in Parkinson’s disease patients: a case series. *J. Clin. Pharm. Ther.* **39**, 564–566 (2014).
d. Giacoppo, S. *et al.* A new formulation of cannabidiol in cream shows therapeutic effects in a mouse model of experimental autoimmune encephalomyelitis. *DARU J. Pharm. Sci.* **23**, 48 (2015).
e. Pertwee, R. G. Cannabinoids and multiple sclerosis. *Mol. Neurobiol.* **36**, 45–59 (2007).
f. Parker, L. A., Mechoulam, R. & Schlievert, C. Cannabidiol, a non-psychoactive component of cannabis and its synthetic dimethylheptyl homolog suppress nausea in an experimental model with rats. *Neuroreport* **13**, 567–570 (2002).
g. Ribeiro, A. *et al.* Cannabidiol, a non-psychotropic plant-derived cannabinoid, decreases inflammation in a murine model of acute lung injury: Role for the adenosine A2A receptor. *Eur. J. Pharmacol.* **678**, 78–85 (2012).
h. WHO, W. H. O. *Cannabidiol (CBD): pre-review report. Expert Committee on Drug Dependence* **39**, (2017).

Source: 180 Life Sciences Corp.