NEWS RELEASE

Lantern Pharma Receives Certificate of Patent from Japanese Patent Office (JPO) for Composition of Matter Covering Drug Candidate LP-284

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- LP-284 is currently in a Phase 1 clinical trial, having been developed with guidance from Lantern's AI platform, RADR®, as a potential therapy for relapsed or refractory non-Hodgkin's lymphoma and certain genomically defined sarcomas.
- LP-284 is the third molecule brought to clinical trials by Lantern Pharma using insights and support from RADR®, Lantern's AI, machine learning and computational biology platform focused on oncology drug development.
- Japan is the third country to date where a composition of matter patent has been issued for LP-284.
- The addition of the new patent further strengthens LP-284's future clinical development and creates pathways for potential future geographic partnerships.
- Lantern estimates that LP-284 can have the potential to improve outcomes for 40,000 to 80,000 patients with blood cancers annually, with a global annual market potential of $4 Billion USD.

DALLAS--(BUSINESS WIRE)-- Lantern Pharma Inc., (NASDAQ: LTRN), an artificial intelligence ("AI") company developing targeted and transformative cancer therapies using its proprietary RADR® AI and machine learning ("ML") platform with multiple clinical-stage drug programs, today announced that the Japan Patent Office (JPO) has issued a Certificate of Patent for patent application no. 2021-513267 / registration no. 7489966 directed to Lantern Pharma's drug candidate LP-284 ((+)N-hydroxy-N-(methylacylfulvene)urea). The Certificate of Patent entitled

"Illudin Analogs, Uses Thereof, and Methods for Synthesizing the Same" covers molecule LP-284, including claims covering the new molecular entity. A Certificate of Patent is issued after JPO examinations have confirmed the merits of a patent request. Lantern values the broad protection this latest patent provides.

"The addition of a JPO-issued patent for LP-284 to our intellectual property portfolio strengthens the future of this novel therapeutic for the commercial market and expands the potential for LP-284 to positively impact outcomes for patients with unmet needs in non-Hodgkin's lymphomas," said Panna Sharma, CEO and President, Lantern Pharma. "It also supports the use of Lantern's AI technologies to accelerate the development of novel cancer therapies."

Lantern previously received a similar patent on LP-284 from the US Patent and Trademark Office (USPTO) in April 2023, with an expiry in early 2039. Lantern anticipates receiving similar or same patent rights for LP-284 in Europe, China, Australia, Canada, and Korea.

LP-284 has already seen significant success in its progress in the United States. In 2023, the FDA cleared an investigational new drug (IND) application for LP-284, and Lantern Pharma began enrolling patients for a first-in-human Phase 1 clinical trial evaluating LP-284 in patients with relapsed or refractory non-Hodgkin's Lymphoma (NHL), including mantle cell lymphoma (MCL) and double hit lymphoma (DHL) and other high-grade B-cell lymphomas (HGBL) as well as other select solid tumors and sarcomas. In mid-March 2024, Lantern announced that the first two patients had been dosed in the Phase 1 clinical trial.

MCL accounts for up to ~5,800 cases of NHL in Japan each year. In the U.S. and Europe, MCL and DHL are diagnosed in a combined ~9,000 patients each year. Nearly all patients diagnosed with MCL will relapse after treatment and LP-284 represents a potential improved novel therapeutic option for treatment of relapsed or recurrent NHL.

LP-284 has also been granted an Orphan Drug Designation (ODD) by the U.S. FDA for the treatment of HGBL, and another for the treatment of MCL. LP-284 is the second drug candidate from Lantern Pharma to receive such designation from the FDA. LP-184— a novel therapeutic in clinical development for the potential treatment of malignant gliomas, pancreatic cancer, and atypical teratoid rhabdoid tumors (ATRT)— has also been granted an ODD by the FDA, along with a Rare Pediatric Disease Designation.

About Lantern Pharma:

Lantern Pharma (NASDAQ: LTRN) is an AI company transforming the cost, pace, and timeline of oncology drug discovery and development. Our proprietary AI and machine learning (ML) platform, RADR®, leverages over 60 billion oncology-focused data points and a library of 200+ advanced ML algorithms to help solve billion-dollar, real-world problems in oncology drug development. By harnessing the power of AI and with input from world-class

scientific advisors and collaborators, we have accelerated the development of our growing pipeline of therapies that span multiple cancer indications, including both solid tumors and blood cancers and an antibody-drug conjugate (ADC) program. On average, our newly developed drug programs have been advanced from initial AI insights to first-in-human clinical trials in 2-3 years and at approximately $1.0 - 2.5 million per program.

Our lead development programs include a Phase 2 clinical program and multiple Phase 1 clinical trials. We have also established a wholly-owned subsidiary, Starlight Therapeutics, to focus exclusively on the clinical execution of our promising therapies for CNS and brain cancers, many of which have no effective treatment options. Our AI-driven pipeline of innovative product candidates is estimated to have a combined annual market potential of over $15 billion USD and have the potential to provide life-changing therapies to hundreds of thousands of cancer patients across the world.

Please find more information at:

- Website: **www.lanternpharma.com**
- LinkedIn: **https://www.linkedin.com/company/lanternpharma/**
- X: **@lanternpharma**

Forward-looking Statements:

This press release contains forward-looking statements 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. These forward-looking statements include, among other things, statements relating to: future events or our future financial performance; the potential advantages of our RADR® platform in identifying drug candidates and patient populations that are likely to respond to a drug candidate; our strategic plans to advance the development of our drug candidates and antibody drug conjugate (ADC) development program; estimates regarding the development timing for our drug candidates and ADC development program; expectations and estimates regarding clinical trial timing and patient enrollment; our research and development efforts of our internal drug discovery programs and the utilization of our RADR® platform to streamline the drug development process; our intention to leverage artificial intelligence, machine learning and genomic data to streamline and transform the pace, risk and cost of oncology drug discovery and development and to identify patient populations that would likely respond to a drug candidate; estimates regarding patient populations, potential markets and potential market sizes; sales estimates for our drug candidates and our plans to discover and develop drug candidates and to maximize their commercial potential by advancing such drug candidates ourselves or in collaboration with others. Any statements that are not statements of historical fact (including, without limitation, statements that use words such as "anticipate," "believe," "contemplate," "could," "estimate," "expect," "intend," "seek," "may," "might," "plan," "potential," "predict," "project," "target," “model,” "objective," "aim," "upcoming," "should," "will," "would," or the negative of these words or other

similar expressions) should be considered forward-looking statements. There are a number of important factors that could cause our actual results to differ materially from those indicated by the forward-looking statements, such as (i) the risk that our research and the research of our collaborators may not be successful, (ii) the risk that promising observations in preclinical studies do not ensure that later studies and development will be successful, (iii) the risk that we may not be successful in licensing potential candidates or in completing potential partnerships and collaborations, (iv) the risk that none of our product candidates has received FDA marketing approval, and we may not be able to successfully initiate, conduct, or conclude clinical testing for or obtain marketing approval for our product candidates, (v) the risk that no drug product based on our proprietary RADR® AI platform has received FDA marketing approval or otherwise been incorporated into a commercial product, and (vi) those other factors set forth in the Risk Factors section in our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the Securities and Exchange Commission on March 18, 2024. You may access our Annual Report on Form 10-K for the year ended December 31, 2023 under the investor SEC filings tab of our website at **www.lanternpharma.com** or on the SEC's website at **www.sec.gov**. Given these risks and uncertainties, we can give no assurances that our forward-looking statements will prove to be accurate, or that any other results or events projected or contemplated by our forward-looking statements will in fact occur, and we caution investors not to place undue reliance on these statements. All forward-looking statements in this press release represent our judgment as of the date hereof, and, except as otherwise required by law, we disclaim any obligation to update any forward-looking statements to conform the statement to actual results or changes in our expectations.

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