NEWS RELEASE

Lantern Pharma Secures USPTO Notice of Allowance for LP-284 Treatment Patent in Aggressive B-Cell Lymphomas

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Newly allowed claims provide LP-284 patent protection into 2042 for the treatment of mantle cell lymphoma and double-hit lymphoma, two blood cancers with high-unmet-needs

- The U.S. Patent and Trademark Office (USPTO) has issued a Notice of Allowance for U.S. Patent Application No. 18/500,032, "Method for Treating Blood Cancers," with claims directed to the use of LP-284 (hydroxyureamethyl acylfulvene) to treat mantle cell lymphoma (MCL) and double-hit lymphoma (DHL)
- Allowed claims include methods of treatment as a monotherapy and in combination with a second anti-cancer agent — including DNA damage agents, glucocorticoids, immunomodulatory drugs (IMiDs), BCL2 inhibitors, BTK inhibitors, spironolactone, PARP inhibitors, and proteasome inhibitors
- Once issued, the patent is expected to extend Lantern's LP-284 patent protection into 2042, complementing the existing composition-of-matter estate that provides protection into 2039 across major markets
- LP-284 holds three FDA Orphan Drug Designations — in MCL, high-grade B-cell lymphoma (HGBL) with MYC and BCL2 rearrangements, and soft tissue sarcomas — and is being evaluated in an ongoing Phase 1 clinical trial (NCT06132503)

DALLAS--(BUSINESS WIRE)-- Lantern Pharma Inc. (NASDAQ: LTRN), an AI-driven precision oncology company transforming the cost, pace, and timeline of oncology drug discovery and development, today announced that the United States Patent and Trademark Office (USPTO) has issued a Notice of Allowance for U.S. Patent Application No.

18/500,032, titled "Method for Treating Blood Cancers," with claims directed to the use of the company's drug candidate LP-284 to treat patients with mantle cell lymphoma (MCL), double-hit lymphoma (DHL), and other blood cancers.

The allowed claims cover methods of treating a subject diagnosed with blood cancer by administering an effective amount of LP-284, when the cancer is mantle cell lymphoma or double-hit lymphoma. Additional allowed claims cover the co-administration of LP-284 with a second anti-cancer agent selected from: DNA damaging agents, glucocorticoids, immunomodulatory drugs (IMiDs), BCL2 inhibitors, Bruton's tyrosine kinase (BTK) inhibitors, spironolactone, PARP inhibitors, and proteasome inhibitors. Additional claims also cover routes of administration including intravenous and intraperitoneal delivery. A Notice of Allowance is issued after the USPTO determines that prosecution on the merits of a patent application has concluded, and the patent grants upon payment of the required issuance fee.

"This Notice of Allowance marks an important step in building a durable, layered intellectual-property portfolio around LP-284," said Panna Sharma, President and Chief Executive Officer of Lantern Pharma. "The anticipated patent claims cover the use of LP-284 as a monotherapy and in combination with other therapeutic agent classes for mantle cell lymphoma and double-hit lymphoma, two aggressive B-cell lymphomas with significant unmet needs globally. Together with our composition-of-matter patent estate, this patent is expected to provide LP-284 protection into 2042 and strengthen the program's long-term commercial potential. Advancing LP-284 from AI-generated insights through our RADR® platform to a first-in-human clinical trial in less than three years demonstrates the potential of our precision approach to efficient, data-driven drug development for novel therapies."

Strengthening a Global LP-284 Patent Estate

The newly allowed method-of-treatment patent builds on Lantern's existing LP-284 composition-of-matter estate, which provides protection into 2039 across major medicine markets, including the United States, European Union, Japan, China, India, Mexico, Korea, and Australia. Lantern received its first U.S. composition-of-matter Notice of Allowance for LP-284 in April 2023, followed by a Certificate of Patent from the Japan Patent Office in June 2024 and a European Patent Office allowance in July 2025. Once issued, the "Method for Treating Blood Cancers" patent is expected to extend Lantern's LP-284 protection into 2042, adding a distinct layer of method-of-use protection on top of the underlying composition-of-matter rights.

Lantern intends to continue prosecuting additional patent applications directed to further indications, combination regimens, and formulations of LP-284 to further strengthen its intellectual property portfolio.

LP-284 — An AI-Optimized, Next-Generation Acylfulvene for Aggressive B-Cell Cancers

LP-284 is an investigational, next-generation acylfulvene and the stereoisomer (enantiomer) of Lantern's drug candidate LP-184. It was optimized using Lantern's proprietary RADR® artificial intelligence platform, which identified its synthetically lethal mechanism targeting cancer cells with DNA damage repair (DDR) deficiencies. Unlike LP-184, whose activity depends on the enzyme PTGR1, LP-284's cytotoxic activity is independent of PTGR1 expression, making it well suited to hematologic malignancies. LP-284 induces DNA lesions that are primarily repaired by the transcription-coupled nucleotide excision repair (TC-NER) pathway, and its activity is retained in tumors deficient in ATM — a gene inactivated in an estimated 40%–50% of MCL patients — as well as regardless of TP53 mutation status or lymphoma surface antigen expression.

In preclinical studies, LP-284 has demonstrated nanomolar potency across a panel of B-cell non-Hodgkin's lymphoma models, with the highest potency observed in MCL cell lines, including lines resistant to standard-of-care agents. In data presented at the 2022 Society of Hematologic Oncology (SOHO) Annual Meeting, LP-284 showed its lowest IC50 of 88 nM in the bortezomib-resistant MINO MCL cell line and 193 nM in the ibrutinib/venetoclax-resistant MAVER-1 line, demonstrating activity even in models resistant to ibrutinib, bortezomib, venetoclax, and zanubrutinib. LP-284 has also shown preclinical synergy with rituximab in high-grade B-cell lymphoma models, and combination with spironolactone enhanced sensitivity to LP-284 by 2.4-fold in a multiple myeloma cell line.

LP-284 holds three FDA Orphan Drug Designations: for mantle cell lymphoma (granted January 2023), for high-grade B-cell lymphoma with MYC and BCL2 rearrangements (granted November 2023), and for soft tissue sarcomas (granted January 2026). These represent three of the six total Orphan Drug Designations granted across Lantern's clinical pipeline.

Clinical Program

LP-284 is currently being evaluated in an ongoing Phase 1a dose-escalation clinical trial (NCT06132503) in patients with relapsed or refractory B-cell non-Hodgkin's lymphomas and solid tumors. In 2025, Lantern reported that a heavily pretreated 41-year-old patient with aggressive Grade 3 non-germinal center B-cell diffuse large B-cell lymphoma (DLBCL) — who had failed three prior state-of-the-art treatment regimens, including CAR-T cell therapy and a CD3xCD20 bispecific antibody — achieved a confirmed complete metabolic response after just two 28-day cycles of LP-284. To date, LP-284 has been well tolerated, with primarily Grade 1–2 adverse events reported.

Market Opportunity and Unmet Need

MCL and DHL are aggressive B-cell lymphomas characterized by high relapse rates and poor prognoses. Nearly all MCL patients acquire resistance to and relapse from standard-of-care therapies, and patients with double-hit

lymphoma face particularly poor outcomes following relapse. Lantern estimates that LP-284 targets a global market estimated at $4 billion annually for blood cancers, driven by the rising incidence of non-Hodgkin's lymphoma globally, and has potential to address an estimated market that could improve outcomes for 40,000 to 80,000 blood cancer patients annually.

About LP-284

LP-284 is an investigational next-generation acylfulvene designed to exploit synthetic lethal interactions in cancer cells with DNA damage repair deficiencies. Developed through Lantern's RADR® AI platform, LP-284 induces DNA lesions primarily repaired by transcription-coupled nucleotide excision repair (TC-NER), creating a distinct anti-tumor profile. The compound's efficacy remains unaffected by TP53 mutation or lymphoma surface antigen expression, and preclinical studies demonstrate synergistic activity with rituximab and the ability to overcome ibrutinib resistance. LP-284 is currently in Phase 1 evaluation (NCT06132503) and has received multiple FDA Orphan Drug Designations, including for mantle cell lymphoma, high-grade B-cell lymphomas, and soft tissue sarcomas.

About Lantern Pharma

Lantern Pharma (NASDAQ: LTRN) is an AI-driven precision oncology company transforming the cost, pace, and timeline of oncology drug discovery and development. Its proprietary RADR® platform leverages machine learning and large-scale genomic and clinical data — more than 200 billion oncology-focused data points and a library of 200+ advanced machine learning algorithms — to identify biomarker signatures and guide the development of targeted therapies for patients with significant unmet need. Lantern's clinical-stage pipeline includes LP-184 (zirdafulven), LP-300, and LP-284, along with Lantern’s central-nervous-system focused subsidiary, Starlight Therapeutics, and its AI subsidiary, Open Medicine AI. For more information, visit **www.lanternpharma.com**.

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; our patents and intellectual property profile; expectations and estimates regarding patent terms and coverage relating to LP-284; our clinical development plans, expectations and estimates regarding clinical trial timing and patient enrollment; estimates regarding patient populations, potential markets and potential market sizes; and our plans to discover and develop drug candidates and to maximize their commercial potential.

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 we may not be able to secure sufficient future funding when needed and as required to advance and support our existing and planned clinical trials and operations, (ii) the risk that a patent may not issue from an allowed application on the expected timeline or with the expected term, (iii) the risk that actual patent terms and coverage may differ from expectations, (iv) the risk that observations in preclinical studies and early or preliminary observations in clinical studies do not ensure that later observations, studies and development will be consistent or successful, (v) the risk that our research and the research of our collaborators may not be successful, (vi) the risk that we may not be successful in licensing potential candidates or in completing potential partnerships and collaborations, (vii) 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, (viii) the risk that no drug product based on our proprietary AI platforms has received FDA marketing approval or otherwise been incorporated into a commercial product, and (ix) those other factors set forth in the Risk Factors section in our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the Securities and Exchange Commission on March 30, 2026.

You may access our Annual Report on Form 10-K for the year ended December 31, 2025 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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