NEWS RELEASE

Lantern Pharma Receives USPTO Notice of Allowance for Patent Covering Biomarker-Guided Treatment with LP-184 (Zirdafulven) in Multiple Solid Tumor Cancers

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- Allowed patent claims cover the use of a three-gene expression signature — PTGR1, PTPN14, and ASPH — to identify patients for treatment with LP-184 (Zirdafulven)
- In a completed 63-patient Phase 1a trial, LP-184 demonstrated a 45% disease control rate (n = 29) among patients with recurrent or refractory advanced cancers treated at or above the effective therapeutic dose
- LP-184 is planned to be evaluated in multiple precision oncology Phase 1b/2 clinical trials in advanced aggressive and rare cancers during 2026

DALLAS--(BUSINESS WIRE)-- Lantern Pharma Inc. (NASDAQ: LTRN), a clinical-stage biopharmaceutical company using artificial intelligence and genomic data to develop targeted cancer therapies, today announced that the United States Patent and Trademark Office has issued a Notice of Allowance for U.S. Patent Application No. 17/230,821, titled "Methods for the Treatment of Solid Tumor Cancers Using Illudins and Biomarkers."

The allowed claims cover methods of selecting and treating patients with ovarian, primary liver, kidney, or thyroid cancer with LP-184 (zirdafulven) based on measured elevated expression of each of three genes — PTGR1, PTPN14, and ASPH — in a patient tumor sample.

"PTGR1 is unique in that it sits on both sides of the equation — it is associated with aggressive tumor biology, and it

is the enzyme that activates LP-184 inside the tumor cell," said Kishor Bhatia, Ph.D., Chief Scientific Officer of Lantern Pharma. "Combining it with PTPN14 and ASPH gives us a selection signature that leverages additional features of tumors that either make them aggressive by impacting proliferation, as in the case of ASPH, or are part of parallel pathways that confer sensitivity to LP-184, as is the case of PTPN14. The allowance recognizes that this biomarker signature is a unique approach, and we expect this to help us increase the likelihood of response and benefit for patients in our clinical trials."

AI-Guided Precision Medicine Approach

Lantern's proprietary RADR® artificial intelligence platform played a central role in LP-184's development, identifying prostaglandin reductase-1 (PTGR1) overexpression and low expression of multiple DDR genes as strong predictors of LP-184 sensitivity.

LP-184 functions as a prodrug that is selectively activated inside cancer cells by PTGR1, which is frequently overexpressed in tumors. Upon activation, LP-184 forms a highly reactive metabolite that damages the DNA of the cancer cell and induces interstrand cross-links and double-strand breaks — damage that cannot be repaired in tumors with deficient DNA damage repair (DDR) pathways, resulting in selective cancer-cell death while sparing normal cells.

Lantern Pharma completed a 63-patient LP-184 Phase 1a trial in patients with recurrent or refractory advanced solid tumors. Among patients treated at or above the effective therapeutic dose, the disease control rate was 45%. LP-184 is planned to be evaluated in multiple precision oncology Phase 1b/2 trials in advanced aggressive and rare cancers during 2026.

Lantern Pharma intends to continue expanding its patent portfolio through additional filings covering further indications and biomarker-guided applications of LP-184.

Webinar: Inside The Data — An In-Depth Discussion of the LP-184 Science, Clinical Trial Results, and Future Development Plans

For a comprehensive review of LP-184's mechanism of action, detailed Phase 1a clinical data, patient case studies, and the company's development strategy, Lantern Pharma invites stakeholders to view the recent "Inside The Data" webinar featuring management and a Key Opinion Leader from Fox Chase Cancer Center. The webinar provides in-depth scientific context and clinical insights that complement this announcement and is available on Lantern Pharma's YouTube channel at: **https://youtu.be/yyAaQZvMx6I**

About LP-184

LP-184 is a next-generation acylfulvene that is synthetically lethal and designed to selectively target solid tumors with DNA damage repair pathway deficiencies. As a prodrug activated by the enzyme PTGR1, LP-184 induces irreparable DNA damage in cancer cells while sparing normal tissue. The compound has demonstrated nanomolar potency in preclinical models and encouraging durability in early clinical testing in heavily pre-treated patients. LP-184 has received FDA Fast Track Designation for TNBC and GBM, and Orphan Drug Designation for malignant gliomas, pancreatic cancer, and ATRT.

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 to identify biomarker signatures and guide the development of targeted therapies for patients with significant unmet need.

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; plans, objectives and expectations regarding the clinical trials; LP-184's potential patents and intellectual property profile; 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 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 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 observations in preclinical studies and emerging or preliminary observations in clinical studies do not ensure that later observations, studies and development will be consistent or successful, (iii) the risk that any clinical benefit observed to date relating to our drug candidates may not be reproduced in future trials or in larger or confirmatory studies, (iv) the risk that clinical data referenced in this press release relating to LP-184 are exploratory and preliminary, based on small patient cohorts, and may not be representative of outcomes in broader populations, (v) the risk that cross-trial comparisons are provided for

context only and should not be interpreted as direct evidence of comparative safety or efficacy, (vi) the risk that our research and the research of our collaborators may not be successful, (vii) the risk that we may not be successful in licensing our product candidates or in completing potential partnerships and collaborations, (viii) 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, (ix) 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 (x) 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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