Lantern Pharma Reports Third Quarter 2025 Financial Results and Provides Business Updates

Transformational Quarter Marked by Clinical Validation, Regulatory Progress, and Strategic Momentum in Commercial AI Platform Launch

- **LP-184 Phase 1a clinical trial results demonstrate all primary endpoints achieved** with 48% clinical benefit rate in evaluable cancer patients at or above therapeutic dose threshold; marked tumor reductions observed in patients with DNA damage repair mutations including CHK2, ATM, and STK11/KEAP1 alterations.
- **FDA Type C meeting completed**, providing regulatory guidance and pathway clarity for Starlight Therapeutics' planned pediatric CNS cancer trial in Atypical Teratoid Rhabdoid Tumor (ATRT) and confirming spironolactone combination strategy.
- **LP-300 preliminary Phase 2 data presented** from the HARMONIC™ trial at the 66th Annual Meeting of the Japan Lung Cancer Society with further clinical and patient data planned for a webinar in December.
- **LP-284 clinical data showcased at 25th Annual Lymphoma, Leukemia & Myeloma (LL&M) Congress**, generating interest from the biopharma and clinical communities and initiating discussions for combination therapy potential.
- **KOL-hosted scientific webinar on LP-184 Phase 1a results scheduled for November 20, 2025 at 4:30 p.m. ET**, providing insights from key opinion leader at Fox Chase Cancer Center along with additional clinical data and future plans from Lantern management.
- **Precision, biomarker-driven development strategy strengthened by Phase1a data,** positioning LP-184 for targeted Phase 1b/2 trials in TNBC, NSCLC with KEAP1/STK11 mutations, bladder cancer, and first recurrent GBM—indications representing combined market potential exceeding $7 billion annually.
- **AI platform commercial readiness demonstrated** at inaugural AI for Biology and Medicine symposium, showcasing RADR® platform modules as deployable tools for biopharma partners.
- **Disciplined capital management maintained** with approximately $12.4 million in cash, cash equivalents, and marketable securities as of September 30, 2025, providing expected operating runway into approximately Q3 2026.
- Conference call and webcast scheduled for **Thursday, November 13, 2025 at 9:00 a.m. ET.**

DALLAS--(BUSINESS WIRE)-- **November 13, 2025**, Lantern Pharma Inc. (NASDAQ: LTRN), a clinical-stage biopharmaceutical company leveraging its proprietary RADR® artificial intelligence

(AI) and machine learning (ML) platform to transform the cost, pace, and timeline of oncology drug discovery and development, today announced operational highlights and financial results for the third quarter 2025 ended September 30, 2025, and provided an update on its portfolio of AI-driven drug candidates and AI platform, RADR®.

"*The third quarter represented a transformational period for Lantern Pharma as we announced successful enrollment completion of our LP-184 Phase 1a trial, achieving all primary endpoints with unique clinical benefit observations in multiple hard-to-treat solid tumors,*" said Panna Sharma, CEO & President of Lantern Pharma. "*The observed 48% clinical benefit rate at or above the therapeutic dose threshold, combined with the favorable safety profile and clear biomarker signals, validates our AI-driven, precision medicine approach and positions us to advance multiple planned high-value Phase 1b/2 trials. Simultaneously, our productive FDA Type C meeting provides a clear regulatory pathway for our pediatric CNS cancer program under our subsidiary Starlight Therapeutics. Additionally, the interest generated for LP-284 at the LL&M Congress underscores the commercial potential across our pipeline. We are executing with discipline and focus as we advance toward pivotal value-creation milestones in multiple oncology indications.*"

Clinical Pipeline Developments

LP-184: Detailed Phase 1a Results Demonstrate Clinical Proof-of-Concept & Activity

In September, Lantern announced the completion of enrollment and initial clinical results from its LP-184 Phase 1a clinical trial (NCT05933265), which successfully achieved all primary endpoints. The data across the 63 patients enrolled provided critical insights into safety, pharmacokinetics, biomarker correlations, and clinical activity that position LP-184 for advancement into targeted planned Phase 1b/2 studies.

Highlights of the Phase 1a Results:

- Clinical Benefit and Activity: The trial demonstrated clinical benefit in 48% of evaluable cancer patients treated at or above the therapeutic dose threshold. This encouraging activity was observed in heavily pretreated patients who had exhausted available standard-of-care therapies, representing proof-of-concept for LP-184's synthetic lethal mechanism.
- Safety Profile Supports Broad Development: LP-184 demonstrated a favorable safety and tolerability profile with minimal dose-limiting toxicities. The safety data support

advancement into both monotherapy and combination therapy approaches with PARP inhibitors and immunotherapy agents.

- Activity in Difficult-to-Treat Cancers: Notable clinical benefits were observed in historically challenging tumor types including glioblastoma multiforme (GBM), gastrointestinal stromal tumor (GIST), and thymic carcinoma. Several patients have continued treatment beyond enrollment completion due to ongoing clinical benefit.
- Biomarker Strategy Strengthened: A key finding from the Phase 1a trial was the observation of marked tumor reductions in patients harboring specific DNA damage repair mutations, including CHK2, ATM, BRCA1, and STK11/KEAP1 alterations. These biomarker insights directly validate the AI-driven patient stratification approach developed through Lantern's RADR® platform and support the use of genomic selection criteria in future trials.
- Pharmacokinetics Enable Dose Optimization: The trial successfully characterized LP-184's pharmacokinetic profile and established the recommended Phase 2 dose (RP2D) of 0.39 mg/kg, providing clear dosing guidance for planned Phase 1b/2 studies across multiple indications.

Based on the Phase 1a results and biomarker insights, Lantern is advancing development plans for LP-184 in three high-value indications:

- Triple-Negative Breast Cancer (TNBC), which represents a potential annual market opportunity exceeding $4 billion.
- NSCLC with STK11/KEAP1 Co-mutations: Phase 1b/2 study in a biomarker-defined subset of patients with mutations in STK11 and/or KEAP1 genes, representing a significant unmet medical need and a potential annual market approaching $1.5 billion.
- Bladder Cancer with DNA damage repair mutations in patients who have relapsed from SOC (standard of care) therapies, which is planned to be an investigator-led study initiating in Denmark.

Comprehensive results from the LP-184 Phase 1a trial are being prepared for submission to peer-reviewed journals and presentation at major oncology conferences. To provide additional insights and expert analysis of the clinical data, Lantern will host a Key Opinion Leader (KOL)-hosted scientific webinar on November 20, 2025 at 4:30 p.m. Eastern Time featuring detailed discussion of the Phase 1a results, biomarker findings, and clinical development strategy.

FDA Type C Meeting: Clarity in Regulatory Path for Pediatric CNS Cancer Program

A major third quarter regulatory milestone was the successful completion of a Type C meeting with the U.S. Food and Drug Administration during September. This meeting provided important guidance on the regulatory pathway and trial design for Starlight Therapeutics' – a wholly owned subsidiary of Lantern Pharma – planned pediatric clinical trial focused on CNS cancers,

including Atypical Teratoid Rhabdoid Tumor (ATRT). The FDA provided constructive and supportive feedback on the proposed clinical trial structure.

Key outcomes from the Type C meeting included:

- Parallel ATRT Cohort Supported: The FDA confirmed support for a parallel cohort design specifically for ATRT patients, which will accelerate data collection in this ultra-rare pediatric population while maintaining statistical rigor.
- Combination Strategy Confirmed: The agency confirmed the potential incorporation of spironolactone as a combination agent with LP-184/STAR-001. This combination strategy is based on preclinical data demonstrating synergistic activity and RADR® platform predictions of enhanced efficacy in pediatric brain tumors.
- Trial Design Alignment: The FDA provided guidance on appropriate endpoints, patient selection criteria, and safety monitoring approaches for this vulnerable pediatric population, enabling Starlight Therapeutics to finalize the clinical protocol with confidence in the regulatory pathway.

Regulatory Designations and Market Opportunity:

- LP-184, which is being developed as STAR-001 by Starlight Therapeutics in CNS cancers, has received both Rare Pediatric Disease Designation and Orphan Drug Designation from the FDA for ATRT, along with additional Rare Pediatric Disease Designations for hepatoblastoma, rhabdomyosarcoma, and malignant rhabdoid tumors. These designations underscore the urgent unmet need for innovative therapies in aggressive pediatric cancers and provide potential pathways for possible priority review vouchers upon approval.
- ATRT is an ultra-rare pediatric brain tumor with the genetic hallmark of SMARCB1 gene loss or dysfunction, affecting primarily children under age 3. Current treatment options are limited and associated with significant long-term toxicities, creating substantial demand for novel targeted approaches.

LP-300 HARMONIC™ Trial: Enrollment and Follow-Up Progress

The Phase 2 HARMONIC™ trial continued patient enrollment and follow-up during the third quarter across sites in the United States, Japan, and Taiwan. The trial evaluates LP-300 in combination with standard-of-care chemotherapy (carboplatin + pemetrexed) in never-smokers with NSCLC adenocarcinoma who have progressed after tyrosine kinase inhibitor therapy.

- In late July, Lantern announced the completion of enrollment in Japan for the HARMONIC™ trial across five clinical sites in Japan, including the National Cancer Center Tokyo.
- During November, clinical investigators associated with the HARMONIC™ trial presented data from the ongoing study at the 66th Annual Meeting of the Japan Lung

Cancer Society. Dr. Jonathan Dowell from UT Southwestern Medical Center presented, "*A Phase II Trial of LP-300 plus Carboplatin and Pemetrexed in TKI-Progressed NSCLC Patients*". Data from this presentation included the Asian and US cohorts of the study and will be further reviewed and presented in December by Lantern Pharma.

- Also, during the third quarter the company progressed with a change in clinical staffing and a transition of CRO services in Asia focused on significant cost reductions and efficiency in Taiwan.
- The study's strategic positioning in Asia, where never-smokers represent 33-40% of NSCLC cases compared to approximately 15% in Western populations, positions Lantern for potential regional partnerships and co-development opportunities. The treatment of never-smokers with NSCLC represents an estimated $4+ billion annual market opportunity with no specifically approved therapies for this patient population.

LP-284: LL&M Congress Presentation & Future Development Plans

During October Lantern presented clinical data from its ongoing LP-284 Phase 1 trial at the 25th Annual Lymphoma, Leukemia & Myeloma (LL&M) Congress in New York City. The presentation showcased the confirmed complete metabolic response in a heavily pretreated DLBCL patient and highlighted LP-284's novel mechanism of action and combination therapy potential.

LL&M Congress Impact and Additional Milestones:

- **Presentation generated interest from biopharmaceutical companies and clinical investigators**, with ongoing discussions focused on: combination therapy development with FDA-approved agents; post-immunotherapy treatment strategies; and LP-284's mechanistic differentiation. LP-284 has demonstrated particular lethality in cells with deficient DNA damage response, a targetable vulnerability in NHL.
- **Additional clinical sites being recruited** with a focus on NHL and high-grade B-cell lymphoma patients to accelerate enrollment.
- **Partnership and collaboration discussions advancing** with emphasis on combination therapy protocols.
- **Expansion into autoimmune and inflammatory indications under preclinical evaluation**, leveraging LP-284's B-cell depletion activity.

LP-284 benefits from strong intellectual property protection with composition of matter patents granted in the U.S., Europe, Japan, India, and Mexico, providing exclusivity through 2039. The drug candidate has received multiple FDA Orphan Drug Designations including for mantle cell lymphoma and high-grade B-cell lymphomas.

RADR® AI Platform: Demonstrating Commercial Value and Industry Leadership

AI for Biology and Medicine Symposium: Showcasing Platform Capabilities

A key highlight of the third quarter was Lantern's presentation at the inaugural AI for Biology and Medicine symposium at the University of North Texas on October 30, 2025. This presentation demonstrated the commercial readiness and real-world applicability of two RADR® platform modules. An additional large-scale rollout of a multi-agentic system focused on addressing drug development and research needs in rare cancers that leverages Lantern's unique approach to developing therapies and approaches in rare and orphan cancers is underway. This initiative is planned to be made public during December with broader industry rollout in early 2026.

predictBBB.ai Platform - Best-in-Class BBB Prediction:

- This ensemble machine learning model achieves 94.1% accuracy for blood-brain barrier permeability prediction and can screen 200,000 molecular candidates in under one week. Lantern's algorithms currently hold five of the top eleven positions on the Therapeutic Data Commons Leaderboard, establishing clear technological leadership.
- The platform addresses a critical pharmaceutical challenge: only 2-6% of small-molecule drugs successfully cross the blood-brain barrier. The BBB technologies market is projected to grow from $1.4 billion in 2023 to $9.85 billion by 2032, representing significant commercial opportunity.

LBx-AI Liquid Biopsy Platform - Predictive Biomarker Discovery:

- This AI-powered liquid biopsy analysis platform has achieved 86% accuracy for predicting treatment response in non-small cell lung cancer and has demonstrated a 0.76 Pearson correlation for PD-L1 level inference from circulating tumor DNA analysis. This capability enables non-invasive patient stratification and real-time treatment monitoring.
- Lantern has entered into additional collaborations with leading research and cancer centers to further strengthen and validate this module in other cancers.

RADR® Platform Impact Across Pipeline

The third quarter developments underscore RADR®'s central role in Lantern's drug development success:

- Biomarker Discovery: RADR® predictions of LP-184 sensitivity in CHK2, ATM, and STK11/KEAP1-mutated cancers were validated in the Phase 1a trial, demonstrating the platform's promise for identifying responsive patient populations.
- Combination Therapy Identification: RADR® analysis identified LP-184's synergy with PARP inhibitors and immunotherapy, as well as LP-284's synergy with rituximab, directly informing clinical development strategies and partnership discussions.
- Development Efficiency: On average, Lantern's newly developed AI-guided drug programs have advanced from initial insights to first-in-human trials in 2-3 years at

approximately $1.0-2.5 million per program, demonstrating significant cost and time advantages over traditional development approaches.

Financial Results for Third Quarter 2025

Balance Sheet: Cash, cash equivalents, and marketable securities were approximately $12.4 million as of September 30, 2025, compared to approximately $24.0 million as of December 31, 2024. The company believes that its existing cash, cash equivalents, and marketable securities on hand as of the date of this press release will enable it to fund anticipated operating expenses and capital expenditure requirements into approximately Q3 2026.

Research and Development Expenses: R&D expenses were approximately $2.4 million for the quarter ended September 30, 2025, compared to approximately $3.7 million for the quarter ended September 30, 2024. The decrease was primarily attributable to decreases in research studies and materials of approximately $1,032,000 relating to the conduct and support of clinical trials, decreases in consulting expenses of approximately $55,000 and decreases in payroll and compensation expenses of approximately $224,000. This was partially offset by increases in licensing expenses of approximately $31,000.

General and Administrative Expenses: G&A expenses were approximately $1.9 million for the quarter ended September 30, 2025, compared to approximately $1.5 million for the quarter ended September 30, 2024. The increase was primarily attributable to increases in business development and investor relations expenditures of approximately $321,000, increases in other professional fees of approximately $57,000, and increases in patent costs of approximately $37,000.

Net Loss: Net loss was approximately $4.2 million (or $0.39 per share) for the quarter ended September 30, 2025, compared to a net loss of approximately $4.5 million (or $0.42 per share) for the quarter ended September 30, 2024.

Capitalization: As of September 30, 2025, the Company had approximately 11.0 million shares of common stock outstanding. Options to purchase approximately 1.2 million shares of common stock at a weighted average exercise price of $5.74 per share were outstanding. As of September 30, 2025 there were no warrants outstanding.

In July 2025, the Company entered into an ATM Sales Agreement (“ATM”), with ThinkEquity LLC (“ThinkEquity”), as sales agent, pursuant to which the Company may offer and sell up to $15,530,000 of its common stock from time to time, in “at-the-market” offerings to or through its sales agent. During the quarter ended September 30, 2025, we sold 212,444 shares of common stock under the ATM for the gross proceeds of $989,061. Between October 1, 2025 and the date of this press release, we have sold an additional 144,204 shares of common stock under the ATM for the gross proceeds of $634,333.

Upcoming Milestones and Corporate Developments

Looking ahead to the fourth quarter of 2025 and early 2026, Lantern expects several key value-creation catalysts:

Immediate Near-Term (Q4 2025):

- November 20, 2025 at 4:30 p.m. ET: KOL hosted scientific webinar on LP-184 Phase 1a detailed results and clinical development strategy.
- December 2025: LP-300 further patient follow-up and clinical data.
- Q4 2025: Continued commercial developments for AI platform modules, including the multi-agentic system for rare cancer drug development.

Early 2026 Catalysts:

- Q1 2026: Planned Pediatric CNS cancer trial initiation through Starlight Therapeutics subsidiary (IND amendment submission)
- Q1 2026: Planned initiation of LP-184 Phase 1b/2 trials in TNBC and NSCLC (subject to funding)
- H1 2026: Investigator-led bladder cancer trial initiation in Denmark
- 2026: Additional HARMONIC™ trial data readouts and potential partnership announcements
- Scale up of AI platform commercial efforts
- Preparation for potential capital formation activities to support clinical advancement

Conference Call Information

Lantern Pharma will host a conference call and webcast to discuss third quarter 2025 financial results and business updates on Thursday, November 13, 2025 at 9:00 a.m. Eastern Time.

To participate in the conference call, please register at the Zoom webcast link. A replay of the earnings call webcast will be available after the call on the investor relations section of Lantern's website at ir.lanternpharma.com.

KOL-Hosted LP-184 Scientific Webinar: In addition to the earnings call, Lantern will host a scientific webinar featuring key opinion leader analysis of the LP-184 Phase 1a results on November 20, 2025 at 4:30 p.m. Eastern Time. Please register at the Zoom webcast link.

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 200 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 drug candidates 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.

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 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 early or preliminary observations in clinical studies do not ensure that later observations, studies and development will be consistent or successful, (iii) the risk that our research and the research of our collaborators may not be successful, (iv) the risk that we may not be successful in licensing

potential candidates or in completing potential partnerships and collaborations, (v) 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, (vi) 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 (vii) those other factors set forth in the Risk Factors section in our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the Securities and Exchange Commission on March 27, 2025.

You may access our Annual Report on Form 10-K for the year ended December 31, 2024 under the investor SEC filings tab of our website at http://www.lanternpharma.com/ or on the SEC's website at http://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.

Lantern Pharma Disclosure Channels to Disseminate Information:

Lantern Pharma's investors and others should note that we announce material information to the public about our company and its technologies, clinical developments, licensing matters and other matters through a variety of means, including Lantern Pharma's website, press releases, SEC filings, digital newsletters, and social media, in order to achieve broad, non-exclusionary distribution of information to the public. We encourage our investors and others to review the information we make public in the locations above as such information could be deemed to be material information. Please note that this list may be updated from time to time.

Contacts

Investor Contact
Investor Relations
ir@lanternpharma.com
+1-972-277-1136

Lantern Pharma Inc. and Subsidiaries
Condensed Consolidated Balance Sheets

	September 30, 2025	December 31, 2024
	(Unaudited)	
CURRENT ASSETS		
Cash and cash equivalents	$ 8,389,486	$ 7,511,079
Marketable securities	3,973,090	16,501,984
Prepaid expenses and other current assets	1,098,429	1,234,566
Total current assets	13,461,005	25,247,629
Property and equipment, net	35,977	47,440
Operating lease right-of-use assets	93,090	239,985
Other assets	36,738	36,738
TOTAL ASSETS	$ 13,626,810	$ 25,571,792
CURRENT LIABILITIES		
Accounts payable and accrued expenses	$ 3,946,018	$ 4,140,361
Operating lease liabilities, current	93,954	190,814
Total current liabilities	4,039,972	4,331,175
Operating lease liabilities, net of current portion	-	52,843
TOTAL LIABILITIES	4,039,972	4,384,018
COMMITMENTS AND CONTINGENCIES (NOTE 4)		
STOCKHOLDERS' EQUITY		
Preferred Stock (1,000,000 authorized at September 30, 2025 and December 31, 2024; $.0001 par value) (Zero shares issued and outstanding at September 30, 2025 and December 31, 2024)	-	-
Common Stock (25,000,000 authorized at September 30, 2025 and December 31, 2024; $.0001 par value) (11,040,219 shares and 10,784,725 shares issued and outstanding at September 30, 2025 and December 31, 2024, respectively)	1,104	1,078
Additional paid-in capital	98,616,239	97,058,323
Accumulated other comprehensive income	40,333	153,990
Accumulated deficit	(89,070,838)	(76,025,617)
Total stockholders' equity	9,586,838	21,187,774
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 13,626,810	$ 25,571,792

Lantern Pharma Inc. and Subsidiaries
Condensed Consolidated Statements of Operations (Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2025	**2024**	**2025**	**2024**
Operating expenses:				
General and administrative	$ 1,912,829	$ 1,462,930	$ 5,006,427	$ 4,463,869
Research and development	2,436,971	3,716,646	8,769,305	11,856,169
Total operating expenses	4,349,800	5,179,576	13,775,732	16,320,038
Loss from operations	(4,349,800)	(5,179,576)	(13,775,732)	(16,320,038)
Interest income	100,921	191,352	365,456	580,962
Other income, net	71,456	482,527	365,055	833,063
NET LOSS	$ (4,177,423)	$ (4,505,697)	$ (13,045,221)	$ (14,906,013)
Net loss per share of common shares, basic and diluted	$ (0.39)	$ (0.42)	$ (1.21)	$ (1.39)
Weighted-average number of common shares outstanding, basic and diluted	10,833,393	10,763,351	10,801,126	10,755,015