NEWS RELEASE

Lantern Pharma Reports HARMONIC™ Data Showing LP-300 Progression-Free Survival Benefit Deepens with Treatment Duration in EGFR Exon 21 L858R Lung Cancer

2026-06-02

Exon 21 L858R NSCLC Mutated Patients Treated Through Up to Six Cycles Reached 8.9-Month Median PFS; Durable Responses Beyond Two Years; and a Consistently Clean Safety Profile.

- PFS benefit deepens with treatment duration: L858R patients treated through up to six cycles of LP-300 reached an 8.9-month median PFS, versus 8.4 months overall (n=15) – future patients will be eligible to receive up to 8 doses of LP-300.
- Durable, deep responses: tumor reduction in over 70% of evaluable L858R patients, responses beyond two years, and a 77% clinical benefit rate.
- Clean, treatment-enabling safety: no clinically meaningful toxicity beyond chemotherapy, comparing favorably with amivantamab plus chemotherapy on a cross-trial basis.
- Partnering and KOL discussions ongoing during ASCO 2026: updated data and slides filed today on Form 8-K and are in use for partnering and clinical discussions during ASCO 2026 in Chicago.

DALLAS--(BUSINESS WIRE)-- Lantern Pharma Inc. (NASDAQ: LTRN), an AI-driven precision oncology company, today reported clinical data and updates in the form of a presentation from its ongoing Phase 2 HARMONIC™ trial (NCT05456256) evaluating LP-300 in combination with carboplatin and pemetrexed in patients with EGFR Exon 21

L858R-mutant non-small cell lung cancer (NSCLC) who have progressed following TKI-based therapy. The emerging dataset (data cutoff May 11, 2026) reveals a coherent pattern: the progression-free survival benefit of LP-300 deepens with treatment duration, and the signal is most pronounced in the L858R subgroup — a molecularly defined population with a poor prognosis and limited options following frontline TKI therapy. The Company has furnished the presentation and slides as an exhibit to a **Current Report on Form 8-K filed today**, and is using the updated data and slides for partnering and clinical discussions during ASCO 2026 in Chicago.

“What we are seeing is an early signal that strengthens the longer the biomarker specific patients remain on therapy, and very importantly no notable changes in the exceptionally clean safety and tolerability profile for LP-300,” said Panna Sharma, CEO & President of Lantern Pharma. “These patient observations and clinical benefit patterns provide the rationale behind the recently FDA-cleared protocol amendment extending LP-300 dosing from a maximum of six to eight cycles, and reinforces the Company’s focus on the highly undermet need for the L858R patient subgroup – which is about 40% of EGFR mutated patients globally.”

A Deepening Signal: Benefit Concentrates with Treatment Duration

A key finding and early observation emerging from HARMONIC™ is the relationship between treatment duration and depth of benefit. Patients who received up to six cycles of LP-300 derived greater progression-free survival benefit than those treated for fewer cycles, and within the L858R subgroup this duration effect was most evident — a median PFS of 8.9 months in patients treated through up to six cycles, against 8.4 months in the overall L858R cohort (n=15).

The L858R subgroup also corresponded to a hazard ratio of 0.37 (95% CI 0.15–0.89) favoring L858R. The directional trend toward longer PFS with additional cycles provides the basis for extending treatment duration to eight cycles.

Depth and Durability of Response

Beyond the duration relationship, the data point to durable disease control in the L858R population. More than 70% of evaluable L858R patients experienced a reduction in target-lesion size — including a complete response and multiple partial responses among the deepest responders — and durable responses were sustained beyond two years in select patients. The L858R cohort showed a 77% clinical benefit rate, consistent with the depth and durability observed across the response data.

8.9 mo Median PFS — L858R, up to 6 cycles	>70% Evaluable L858R patients with tumor reduction	2+ yrs Durable responses in select L858R patients	77% Clinical benefit rate — L858R cohort

In a multivariable Cox proportional-hazards analysis, L858R remained significantly and independently associated with PFS benefit after adjustment for race and gender (hazard ratio 0.36; 95% CI 0.15–0.90; p=0.028), with the association persisting when adjusting for TP53 mutation status. These analyses are exploratory and based on a small cohort; they are intended to characterize the emerging signal and inform the enriched study design – which Lantern is pursuing going forward – rather than to establish efficacy.

A Consistently Clean Safety Profile Supports Extended Treatment

Critically, the deepening efficacy signal is accompanied by a tolerability profile that supports longer treatment durations. Across patients treated with LP-300 plus chemotherapy (N=31), LP-300 added no clinically meaningful toxicity beyond the carboplatin/pemetrexed backbone. On a cross-trial basis — provided for context only and not a head-to-head comparison — LP-300 plus chemotherapy compared favorably with the FDA-approved amivantamab-plus-chemotherapy regimen reported in the Phase 3 MARIPOSA-2 study (Passaro A, et al. Ann Oncol 2024), particularly on the administration-burden and dermatologic toxicities that most limit sustained treatment in heavily pre-treated patients:

Adverse Event (any grade unless noted)	LP-300 + Chemo (N=31)	Amivantamab + Chemo (N=130)[1]
Treatment-related serious adverse event	3%	23%
TEAE leading to dose delay (any study drug)	19%	65%
TEAE leading to drug discontinuation	6%	18%
Infusion-related reaction (TRAE)	7%	58%
Rash (TRAE)	7%	43%
Paronychia (TRAE)	0%	36%
Stomatitis (TRAE)	0%	31%

[1] Cross-trial comparison; not a head-to-head study. Amivantamab + chemotherapy data from Passaro A, et al. Annals of Oncology 2024;35(1):77–90 (MARIPOSA-2). LP-300 + chemotherapy data are preliminary; HARMONIC™ data cutoff May 11, 2026.

Competitive Context: Comparable Efficacy, Differentiated Tolerability

Amivantamab plus chemotherapy is FDA-approved in the post-osimertinib setting and represents the current benchmark in this space, with a reported 9.7-month median PFS in L858R patients. LP-300's emerging profile is positioned not as a claim of superior anti-tumor efficacy, but as a comparable efficacy range with a substantially more favorable safety, tolerability, and administration profile — highly relevant in a heavily pre-treated population where tolerability drives real-world outcomes such as quality of life, reduced costs and reduced clinical burden.

Regimen	ORR	mPFS	Key Tolerability Profile
LP-300 + Carboplatin + Pemetrexed (HARMONIC™ — L858R enriched)	43%*	8.4 mo* (6.2–NE) 8.9 mo**	Grade 1–2 predominant; no new added toxicity vs. chemo; 3% serious TRAEs
Amivantamab + Chemo (MARIPOSA-2) [FDA-approved, post-osimertinib] (L858R patients)	36%	9.7 mo (5.9–11.3)	23% serious TRAEs; 58% infusion reactions; 36% paronychia
Carboplatin + Pemetrexed alone (historical standard of care)	27–36%	4.2–5.5 mo	Standard chemotherapy toxicities

*Preliminary data. ORR derived from the initial safety lead-in (n=7); HARMONIC™ mPFS from the L858R-enriched cohort (n=31, data cutoff May 11, 2026). **Patients who received up to six cycles. All comparisons are cross-trial and not head-to-head. NE = not estimable.

Featured for Partnering and Clinical Discussions During ASCO 2026

The convergence of a duration-dependent efficacy signal with a clean, sustainable safety profile carries a clear strategic implication: patients can be treated longer, and longer treatment appears to deepen benefit. This relationship underpins the recently FDA-cleared amendment extending LP-300 dosing to eight cycles and the Company's decision to concentrate enrollment on the L858R subgroup. Lantern Pharma has furnished the **accompanying slides on Form 8-K** and is using the updated dataset for partnering and clinical discussions during ASCO 2026 in Chicago, including potential global and regional licensing and co-development opportunities in never-smoker NSCLC. The Company expects to report additional data as the enriched L858R cohort matures.

LP-300 Shaped & Supported By Lantern's AI Platform For Drug Development

Indication development and refinement for LP-300 were in part supported by early observations from prior trials and large scale differential gene expression and mutational analysis across NSCLC data sets. Panna Sharma commented, "Our LP-300 program reflects a data-driven, AI-powered approach to understanding how a previously overlooked molecule could meaningfully serve the needs of L858R NSCLC patients — a population that has consistently underperformed on existing therapies. The convergence of molecular modeling, high-resolution biology, and biomarker-driven patient selection is fundamentally changing what is possible for precision oncology drug developers, and we believe LP-300 is well positioned at that intersection."

About the HARMONIC™ Trial

HARMONIC™ (NCT05456256) is a Phase 2 clinical trial investigating LP-300 in combination with pemetrexed and carboplatin in never/non-smoker patients with advanced lung adenocarcinoma that has progressed following prior TKI therapy. The trial has enrolled in the United States, Taiwan, and Japan. Primary endpoints are progression-free survival and overall survival; secondary endpoints include objective response rate, duration of response, and clinical benefit rate.

About LP-300

LP-300 is a small-molecule investigational agent with a multimodal mechanism of action, including receptor tyrosine

kinase modulation and redox regulation. It has been administered to more than 1,000 individuals across prior clinical studies. LP-300 is being developed using insights from Lantern's proprietary RADR® AI platform. LP-300 has not received marketing approval from the FDA or any other regulatory authority for any indication.

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 HARMONIC™ clinical trial; LP-300's potential clinical activity and tolerability 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 LP-300 may not be reproduced in the completed HARMONIC™ trial or in larger or confirmatory studies, (iv) the risk that clinical data referenced in this press release relating to the HARMONIC™ clinical trial 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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