August 8, 2022

Lantern Pharma Reports Second Quarter 2022 Financial Results and Operational Highlights

- Lantern has launched the Phase 2 clinical trial, Harmonic™, for LP-300. The Harmonic™ clinical trial is focused on never smokers with advanced non-small cell lung cancer (NSCLC) and will begin patient enrollment during Q3 2022.
- The IND applications for both LP-184 and LP-284 are being targeted for submission in early 2023.
- Lantern anticipates launching two Phase 1 clinical trials for LP-184 and one Phase 1 clinical trial for LP-284 in early 2023.
- RADR® has surpassed 21 billion data points and has had significant improvements in performance, parallelization and the robustness of the algorithms which can facilitate future partnering.
- New preclinical results from several programs will be presented at multiple conferences in the second half of 2022.
- $62.2 million of cash, cash equivalents, and marketable securities as of June 30, 2022.
- A net decrease of $3.1 million in cash, cash equivalents, and marketable securities occurred during the three months ended June 30, 2022.
- Lantern has a cash runway into 2025.
- Conference call scheduled for 4:30 p.m. ET / 1:30 p.m. PT today.

DALLAS--(BUSINESS WIRE)-- **Lantern Pharma Inc. (NASDAQ: LTRN),** a clinical stage biopharmaceutical company using its proprietary RADR® artificial intelligence ("A.I.") and machine learning (“M.L.”) platform to transform the cost, pace, and timeline of oncology drug discovery and development, today announced operational highlights and financial results for the second quarter ended June 30, 2022.

“This quarter was marked with very exciting and important milestones for Lantern as we advance the majority of our drug candidates into and towards clinical trials. In mid-July, we received notice from the FDA that our Phase 2, Harmonic™ trial, for LP-300 was cleared to launch and we anticipate enrolling the first patients in the third quarter of this year. The Harmonic™ trial is focused on a unique population of lung cancer patients who are never smokers and have relapsed non-small cell lung cancer (NSCLC). Not only are never smokers with NSCLC unique, but they also represent a large population of patients with over 200,000 people diagnosed annually worldwide,” stated Panna Sharma, President and CEO of Lantern Pharma.

“Lantern has also established a path to bring our drug candidates LP-184 and LP-284 into Phase 1 clinical trials in the first half of 2023. The structural similarities of these molecules have allowed us to develop synergies in manufacturing, chemical synthesis, and scale-up and we now believe we can bring both of these drug candidates to the clinic near-

simultaneously. We are anticipating two Phase 1 clinical trials for LP-184, one in central nervous system (CNS) indications and one in genomically-defined solid tumors, and one Phase 1 clinical trial for LP-284 in non-Hodgkin's B-cell lymphomas," continued Sharma.

"In addition to the exciting clinical developments, the RADR® team has been focused on making substantial improvements to RADR®'s infrastructure, automation capabilities, and algorithms. These advances will not only streamline RADR® insights for Lantern, but will facilitate future commercial partnering opportunities."

Operational Highlights:

Lantern's Portfolio:

- **LP-300** – In July, Lantern announced the launch of the Phase 2 clinical trial, Harmonic™, for LP-300. Harmonic™ is a clinical trial for never smoker patients with relapsed NSCLC and will assess the effect of LP-300 in combination with standard of care (SOC) chemotherapy, pemetrexed and carboplatin, on patient overall and progression-free survival. The trial will begin enrolling patients this quarter across multiple sites in the US, and enrollment is anticipated to last from 12-16 months. The Company anticipates initial results from the trial will be available in Q4 2023.

  The Company is also engaging in global partnering discussions for regions of the world where there is a higher prevalence of never smokers with NSCLC, including parts of Asia, South America, and Europe. Additional trial information on the Harmonic™ clinical trial can be found at the clinicaltrials.gov website and in the press release for the Harmonic™ trial launch.

- **LP-184 –** Lantern anticipates completing the IND enabling studies and submitting an IND application for LP-184 to the U.S. Food and Drug Administration in Q1 2023. A Phase 1 clinical trial in genomically defined pancreatic, bladder cancers, and other solid tumors is anticipated for Q2 2023.

  This quarter Lantern has also established a pathway towards a second Phase 1 trial for LP-184 in central nervous system (CNS) tumors in collaboration with Johns Hopkins University. Indications for this trial are anticipated to include gliomas and brain metastases, which collectively are diagnosed in over 100,000 patients in the US annually and are estimated to represent a $4 billion global market size. Conducting two Phase 1 trials will allow Lantern to maximize the potential of LP-184 for these two different cancer classes that have varying clinical needs and standards of care.

- **LP-284** – Lantern has accelerated the development of LP-284, aided by manufacturing process and synthesis similarities between LP-284 and LP-184. IND enabling animal studies for LP-284 have been initiated and are targeted to be completed by Q1 2023, with the IND filing for an LP-284 Phase 1 clinical trial anticipated for Q1 2023. Lantern is developing LP-284 for non-Hodgkin's B-cell lymphomas (NHL), where LP-284 has shown nanomolar potency across multiple in vitro and in vivo studies and where there is a demonstrated clinical need. Early NHL indications for LP-284 may include: Mantle Cell Lymphoma (MCL), Double Hit Lymphoma (DHL), and other NHL cancer subtypes.

Based on new and ongoing preclinical studies as well as modeling driven by RADR®, LP-284 has demonstrated nanomolar potency across a range of NHL cancers both as a stand-alone agent and in synergy with today's standard of care drugs such as Ibrutinib and Bortezomib. Lantern will be presenting additional data from these studies later this year. Globally, MCL and DHL alone are estimated to impact over 45,000 patients each year, with virtually all patients relapsing 2-5 years after treatment. There is a significant clinical need for additional late stage therapeutic options for these patients.

- **LP-100** – is in a Phase 2 trial in Denmark for patients with metastatic castration resistant prostate cancer (mCRPC) that meet a certain genomic signature that correlates to enhanced sensitivity to LP-100. In the initial cohort of patients, nine patients experienced a median overall survival of 12.5 months. We are continuing to evaluate clinical development possibilities for LP-100 that we believe can further de-risk the program while increasing the potential for patient benefit that exceeds the current standards of care. At this time, our in silico, in vitro, and in vivo data indicate that co-administration of LP-100 in conjunction with PARP (Poly ADP-Ribose Polymerase) inhibitors can have a synergistic effect in cancer treatment and may represent an improvement over existing standards of care for prostate cancer patients with loss of HRR (homologous recombination repair) function.

  About 20-25% of all patients with advanced prostate cancer present germline or tumor mutations in HRR-related genes, the most common being BRCA2, mutated in approximately 10-12% of all advanced prostate cancers - representing an estimated global opportunity approaching 2.5 billion USD annually in prostate cancer alone.

RADR® Platform Growth and Development

- RADR®, Lantern's A.I. and M.L. platform, surpassed 21 billion data points and is on pace to reach our year end goal of over 25 billion data points. This past quarter, RADR® has undergone significant upgrades to its automation, data interfaces, infrastructure, and integration of a wider range of algorithms. The algorithms are additionally being automated to track performance and precision and also to leverage an ensemble approach to determine fit based on both biological and statistical measures. Further automation is expected to increase the performance of RADR® by a factor of 2x to 4x in the coming months. These advances will increase the power and speed of generating insights from RADR® for Lantern and its collaborators, as well as facilitate additional partnering opportunities.

- In May 2021, Lantern entered a collaboration with Actuate Therapeutics, Inc. to leverage RADR® to accelerate the identification and development of actionable clinical biomarkers for Actuate's drug candidate, elraglusib (9-ING-41). Using advanced ML ensemble algorithms RADR®-aided computational approaches have been successful in identifying candidate predictive biomarkers and modeling clinical response to elraglusib. These insights are being used to inform the development of elraglusib and the design of Phase II randomized clinical trials. These methods will be further applied to future biomarker validation and will be expanded to incorporate modeling with additional forms of patient data in the future, including RNA, ctDNA, soluble

biomarkers, and others. Based our collaboration agreement with Actuate, Lantern will receive equity based on meeting development milestones and the application of computational models to elraglusib pharmacodynamics in future development.

Scientific Collaborations Updates

- This May, Lantern hosted a key opinion leader webinar for Brain Tumor Awareness Month which focused on glioblastoma (GBM) and the potential of LP-184 for GBM and other brain cancers. The webinar featured two leading experts in GBM and brain cancer research from John Hopkins, John Laterra, M.D., Ph.D. and Matthias Holdhoff, M.D., Ph.D. A replay of the webcast can be found here.

- During Childhood Cancer Awareness Month in September, Lantern will host a KOL webinar featuring Dr. Peter Houghton, Ph.D., a leading expert in childhood cancers at the Greehey Children's Cancer Institute at the University of Texas San Antonio Health Science Center. The webinar will focus on challenges in drug development for pediatric cancers and preliminary results from Lantern's drug candidates in preclinical pediatric cancer models. Details of the KOL webinar will be released in early September.

Upcoming Conferences

- In the second half of 2022, Lantern will be presenting new preclinical data at several scientific conferences, including the American Association for Cancer Research (AACR) special conference for pancreatic cancer, the Society of Hematologic Oncology (SOHO) Tenth Annual Meeting, and several others. Results and conference details will be announced in the coming weeks.

- Lantern Pharma's President and CEO, Panna Sharma will be presenting at two investor conferences in the fall, the MicroCap Rodeo in Chicago, October 12-13th and at the ThinkEquity Conference in New York, October 26th, where he will also be leading a panel discussion on "How established and emerging biopharma companies are leveraging AI to transform drug development costs and timelines".

Additional Highlights

- At Lantern's annual meeting of stockholders held on June 8th, 2022, Dr. Maria Maccecchini, Ph.D. was elected to Lantern's Board of Directors, along with 5 existing Directors.

Second Quarter 2022 Financial Overview

- **Balance Sheet**: Cash, cash equivalents, and marketable securities were approximately $62.2 million as of June 30, 2022, compared to approximately $79.6 million as of June 30, 2021. The quarterly cash burn continues to reflect our capital-efficient, collaborator-centered business model.
- **R&D Expenses**: Research and development expenses were approximately $3.0 million for the quarter ended June 30, 2022 compared to approximately $1.2 million for the quarter ended June 30, 2021.
- **G&A Expenses**: General and administrative expenses were approximately $1.4 million for the quarter ended June 30, 2022, compared to approximately $1.3 million for the

quarter ended June 30, 2021.
- **Net Loss**: Net loss was approximately $4.5 million (or $0.41 per share) for the quarter ended June 30, 2022, compared to a net loss of approximately $2.3 million (or $0.21 per share) for the quarter ended June 30, 2021.

Earnings Call and Webinar Details

Lantern will host its second quarter fiscal year 2022 earnings call and webinar today, Monday, August 8th, 2022 at 4:30 p.m. ET.

- https://us06web.zoom.us/webinar/register/4016584141964/WN_OUXnk5T_Tb6cMYD6u
- Related presentation materials will be accessible at: https://ir.lanternpharma.com

Replay Details

- A replay of the Q2 2022 earnings call and webinar will be available at https://ir.lanternpharma.com.

About Lantern Pharma

Lantern Pharma (NASDAQ: LTRN) is a clinical-stage oncology-focused biopharmaceutical company leveraging its proprietary RADR® A.I. and machine learning platform to discover biomarker signatures that identify patients most likely to respond to its pipeline of genomically targeted therapeutics. Lantern is currently developing four drug candidates and an ADC program across nine disclosed tumor targets, including two phase 2 programs. By targeting drugs to patients whose genomic profile identifies them as having the highest probability of benefiting from the drug, Lantern's approach represents the potential to deliver best-in-class outcomes.

Please find more information at:

Website: www.lanternpharma.com
LinkedIn: https://www.linkedin.com/company/lanternpharma/
Twitter: @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," "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 impact of the COVID-19 pandemic, (ii) the risk that our research and the research of our collaborators may not be successful, (iii) 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, (iv) the risk that no drug product based on our proprietary RADR® A.I. platform has received FDA marketing approval or otherwise been incorporated into a commercial product, and (v) those other factors set forth in the Risk Factors section in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission on March 10, 2022. You may access our Annual Report on Form 10-K for the year ended December 31, 2021 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.

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.

View source version on businesswire.com:
https://www.businesswire.com/news/home/20220808005552/en/

Lantern's Investor Relations Contact
Nicole Leber
Investor Relations Associate
ir@lanternpharma.com

Source: Lantern Pharma Inc.