NEWS RELEASE

Lantern Pharma's A.I. Platform, RADR®, Surpasses 60 Billion Data Points – Anticipates Reaching 100 Billion Data Points in 2024, Paving the Way for Enhanced Cancer Therapy Innovations and Expedited Development Timelines

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- The rapid growth of Lantern Pharma's AI platform could lead to accelerated development of better treatments, greater precision in clinical development, and improved combination regimens with the potential for longer and more durable patient responses.
- Lantern's RADR® platform recently surpassed 60 billion data points and is planned to exceed 100 billion data points during 2024 and has been crucial in the expansion of the indications for drug candidate LP-184 and in the accelerated development of LP-284.
- Lantern seeks to focus additional data growth efforts of the RADR® platform on: drug sensitivity data, combination treatment outcome data, and biomarker data in rare cancers, and on emerging synthetic lethal targets that are aimed at accelerating the development of new therapies for Lantern and its partners.
- Lantern will also enhance the RADR® platform's generative AI capabilities, focusing on molecular optimization and automated feature extraction to improve understanding and prediction of molecular dynamics, safety, and drug-drug interactions.

DALLAS--(BUSINESS WIRE)-- Lantern Pharma Inc. (NASDAQ: LTRN), a leader in AI-driven cancer drug discovery and development, announced a series of important milestones related to the development, size, and advancement of RADR® -- its proprietary AI platform focused on transforming the cost, pace, and timeline of oncology drug development.

This press release features multimedia. View the full release here:
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(Graphic: Business Wire)

"Every data point we add to RADR® further advances our goal of building the most complete, largest, and most powerful AI platform for oncology drug development. This unparalleled growth in data points provides us with greater and potentially more accurate insights into areas of cancer treatment that have insofar seen little to no progress, while also giving us a solid and cost-advantaged starting point to transform that," said Panna Sharma, CEO and President of Lantern Pharma. "RADR® has now surpassed 60 billion data points, making innovation in developing cancer therapies potentially more precise, powerful, and comprehensive. Additionally, we continue to automate key areas of the growth in our data collection and curation, leading us to have more successful and larger data expansion campaigns. We expect that the RADR® platform will advance to over 100 billion data points this year, giving us a unique and unparalleled ability aimed at guiding drug development in a wide range of adult and pediatric cancers that need improved therapies."

Lantern plans to continue the expansion and growth of RADR® data with an increasingly automated, machine learning enabled process, that allows the collection, tagging, and curation of datasets from proprietary, collaborative, and public sources in a highly efficient manner. Lantern also expects that a meaningful amount of the new data will come from immuno-oncology (IO) studies, and IO clinical trials as well as from proprietary analysis aimed at molecular feature extraction from hundreds-of-thousands of molecules (both FDA approved and those under development). Large-scale data expansion efforts were initially begun for RADR® in early 2019 when the platform had under 20 million data points, and grew to nearly 300 million data points by mid-2020 (at the time of the Lantern's IPO) and today have grown beyond 60 billion – a 200x increase since the IPO and a nearly 3,000-fold increase since the start of the data-growth campaigns. This strategy has allowed data from thousands of previously siloed sources to be analyzed in a more comprehensive, complete, and productive manner and has aided in the development of new indications for LP-184 and the development of LP-284 in a highly compressed and cost-effective manner while also leading to several conference posters, and scientific publications by Lantern Pharma and our collaborators.

The current data-growth campaigns, which plan on the addition of antigen, immune-response, and protein data, are also enabling a more robust and powerful multi-omic analysis that is positioned to guide the use of LP-184, LP-

284, and other similar synthetically lethal agents in combination with standard-of-care checkpoint inhibitors. These large-scale, machine-learning driven analyses can be critical in future efforts where AI can contribute more efficiently to drug development efforts by automatically creating its own models and testing combinations of drugs not previously being considered, including in rare and hard-to-treat oncology indications where conventional therapies have failed to show any measurable improvement or where patients often will develop resistance to these therapies and require new approaches.

“With every new piece of useful data, RADR® becomes more capable of creating and testing against statistically meaningful models that can help us to identify potential treatments in areas of unmet need that can make a difference and lead to positive outcomes for patients,” said Sharma. “With the growing set of data points RADR® is able to test hundreds of combinations of drugs against these models we did not have before, and quickly determine whether certain compounds deserve additional attention from our efforts or the efforts of our collaborators. Additionally, we can uncover new correlations that may have gone underappreciated or have been challenging to uncover without the support of powerful AI approaches. This expansion of data within RADR® provides the potential to identify and predict pathways of resistance early in drug development and therapeutic avenues to mitigate or circumvent these challenges.”

“RADR’s growth has also deepened our capabilities in novel ADC development and has allowed us greater capability in predicting combination therapy approaches using our own drug candidates as well as existing approved immuno-oncology therapies,” said Sharma. “Previously this type of work in identifying and analyzing new cancer therapies and new uses for existing cancer therapies has been costly, slow and often lacked correlations with real-world outcomes. While studying the impact of compounds and therapeutic combinations previously took years, RADR® has reduced many aspects of this process to mere months. Because the drug development timeline already takes between 10 and 12 years to successfully complete, being able to reduce that by even half would have the potential to not only change the industry but also outcomes for millions of people waiting on cancer therapies and cures.”

About RADR®

RADR® is Lantern Pharma’s proprietary integrated AI platform for large-scale biomarker and drug-tumor interaction data analytics that leverages machine learning. It is used to provide mechanistic insights about drug-tumor interactions, predict the potential response of cancer types and subtypes to existing drugs and drug candidates, and uncover patient groups that may respond to potential therapies being developed by Lantern Pharma and its collaborators.

RADR® uses an ensemble-based approach to apply its library of algorithms to statistical, correlative, and inferential problems in drug-tumor interactions. This allows the platform to rapidly analyze large amounts of complex data

and predict how both patients and tumors will respond to therapeutic combinations. RADR® also evolves as new datasets are added, which improves and sharpens the insights generated from the algorithms.

RADR's highly scalable machine-learning methods are designed to guide drug development and yield new biological insights, while also having the potential to increase response rates and improve outcomes in clinical trials. The robustness and growing number of datasets powering RADR® is anticipated to continue to improve machine-learning results, accelerate automation of other features and aid oncology drug development for Lantern and its partners with an ultimate focus on benefitting cancer patients.

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) RADR® platform leverages over 60 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 therapies including eleven cancer indications 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 approximately 2-3 years and at approximately $1.0-2.0 million per program.

Please find more information at:

Website: **www.lanternpharma.com**
LinkedIn: **https://www.linkedin.com/company/lanternpharma/**
X: **@lanternpharma**
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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 biomarker 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 our research and the research of our collaborators may not be successful, (ii) the risk that promising observations in preclinical studies do not ensure that later studies and development will 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® AI 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, 2022, filed with the Securities and Exchange Commission on March 20, 2023. You may access our Annual Report on Form 10-K for the year ended December 31, 2022 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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