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Lantern Pharma Announces Launch of Antibody Drug Conjugate (ADC) Program to Target Solid Tumors & Blood Cancers through Agreement with Califia Pharma

- Lantern will evaluate and potentially develop ADC programs with novel patent protected linkers, drug payloads and conjugation processes from Califia that have demonstrated enhanced, highly targeted anti-tumor activity, creating new opportunities with Lantern's portfolio of DNA damage compounds

- Lantern plans on evaluating and potentially launching additional programs with the ADC compounds and novel linker technologies in cancers where drug resistance is a key issue for both solid-tumors and blood-cancers and there is unmet patient need

- Lantern believes that the agreement has the potential to add another key dimension to Lantern's focus on leveraging biological data and innovative platforms to accelerate cancer drug development

DALLAS and LA JOLLA, Calif., Jan. 4, 2021 /PRNewswire/ --**Lantern Pharma** (Nasdaq: LTRN), a clinical-stage biopharma company using its proprietary RADR® artificial intelligence ("A.I.") platform to transform cancer drug development and identify patients who will benefit from its targeted oncology therapeutics, today announced that it will be launching the development of its ADC (Antibody Drug Conjugate) program through an evaluation and potential development agreement with Califia Pharma along with other key internal development and computational initiatives. Lantern will potentially leverage the patent-protected linker library, conjugation processes and payloads, including its own DNA damage causing compounds, LP-100 and LP-184, for development as ADC-based therapies for a range of solid tumors and blood cancers. In addition, Lantern intends to utilize its proprietary A.I. platform, known as RADR®, to help determine the cancer types, targets, and cancer biomarker signatures believed most likely to respond to and benefit from this ADC approach. According to industry analysts, the global antibody drug conjugate cancer therapy market is expected to exceed $10 billion USD by 2026, and $15 billion USD by 2030, driven by innovations in protein targeting, linker technologies and conjugation processes.

ADCs bring together the ability to target specific antibodies on specific cancer cells and then link that antibody targeting capability to delivering specific potent molecules or toxic payloads to the targeted cancer cell. ADCs are an emerging class of highly potent drugs that have seen five FDA approvals over the last two years.

"At Lantern we are focused on uncovering and accelerating new advances that can make a meaningful impact on personalizing cancer treatment and that can leverage our A.I. and data driven model for precision cancer drug development. The Califia portfolio of technologies and library of linkers has been meaningfully progressed with a specific focus on the class of drugs represented by LP-100 and LP-184. We believe that this optimization coupled with our identification of cancer sub-types should enable us to target very specific cancers quickly, creating the potential to enter into clinical trials at a speed that we believe has not been achieved in the ADC category," said Panna Sharma, CEO of Lantern Pharma. ADCs can use the specificity of antibodies and antigens to focus cytotoxic small molecules on target cells "precisely" and then kill them based on releasing the "payload" by designing and controlling the linker element. "Pioneering development by Califia has yielded novel linkers and chemistries that we believe have significantly improved the therapeutic index of specific DNA damage compounds and alkylating agents in early pre-clinical studies, and have also minimized the manufacturing steps involved in conjugation of the ADC structure," added Panna Sharma.

"Working closely with innovators and world-leading drug developers is an essential part of our strategy to leverage and develop new platforms that can transform the timeline and effectiveness of cancer drug development. By implementing ADC approaches, we aim to offer cancer patients an additional, highly-targeted platform that can make meaningful contributions in advancing the personalization of treatment, while also benefitting from synergies with our A.I. drug development platform," continued Panna Sharma.

The ADC program will begin immediately and initially focus on evaluating Califia's novel, patented linker technologies with DNA damaging small molecules, including LP-100 and LP-184, in select solid tumors. Lantern also expects to use RADR® to guide the selection and prioritization of certain tumors and cancer subtypes and also to uncover cancer sub-types

where there is significant unmet patient need, especially in rare tumors and orphan indications where there have not been recent meaningful improvements in the standard of care. The ADC development program is at the forefront of translational cancer medicine and will be optimizing target indications and design during 2021, with the intent to launch IND and clinical programs in 2022. Subject to positive results of the evaluation and early development process, Lantern expects to enter into a license(s) that cover the intended target(s), payload(s) and linker(s) to be brought into the clinical development process. This rapid approach is intended to be done in collaboration with leading cancer research centers and will attempt to also implement the use of precision medicine tools, such as biomarker driven targeting and analysis, companion diagnostics, and large-scale analytics to fully leverage the precision power of ADCs.

About Lantern Pharma

Lantern Pharma (LTRN) is a clinical-stage biopharmaceutical company innovating the repurposing, revitalization and development of precision therapeutics in oncology. We leverage advances in machine learning, genomics, and artificial intelligence by using a proprietary A.I. platform to discover biomarker signatures that help identify patients more likely to respond to our pipeline of cancer therapeutics. Lantern's focus is to improve the outcome for patients by leveraging our technology to uncover, rescue and develop abandoned or failed drugs. Our current pipeline of three drugs, with two programs in clinical stages and two in preclinical, focuses on cancers that have unique and unmet clinical needs with a clearly defined patient population. We believe that the use of machine learning, genomics and computational methods can help accelerate the revitalization, refocusing and development of small molecule-based therapies. By targeting drugs to patients whose genomic profile identifies them as having the highest probability of benefiting from the drug, this approach represents the potential to deliver best-in-class outcomes. Our team seeks out experienced industry partners, world-class scientific advisors, and innovative clinical-regulatory approaches to assist in delivering cancer therapies to patients as quickly and efficiently as possible. For more information, please visit the company's website at www.lanternpharma.com or follow the company on Twitter @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; our strategic plans to expand the number of data points that our

RADR® platform can access and analyze; 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 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 to the effect that Lantern Pharma Inc. or our management "believes", "expects", "anticipates", "estimates", "plans" (and 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 antibody drug conjugate (ADC) development program may not be successful; (ii) the risk that our evaluation of linkers, drug payloads and conjugation processes from Califia may not yield meaningful results; (iii) the risk that we may not license any linkers, drug payloads and conjugation processes from Califia; (iv) the risk that we may not be able to successfully initiate, conduct, or conclude clinical testing for or obtain marketing approval for any ADC product candidate; (v) 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 (vi) those other factors set forth in the Risk Factors section in our final prospectus, dated June 10, 2020, for our initial public offering, on file with the Securities and Exchange Commission. You may access our June 10, 2020 final prospectus 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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