NEWS RELEASE

Lantern Pharma Expands into Additional Pediatric Cancers Through a Collaboration with The Greehey Children's Cancer Research Institute (GCCRI) at University of Texas Health Science Center-San Antonio

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- Lantern Pharma's A.I. and machine learning platform, RADR®, aided in the identification of additional pediatric cancers where Lantern's portfolio of drug candidates can be leveraged.
- The research will initially focus on advancing the development of Lantern Pharma's drug candidate, LP-184, into additional childhood cancer indications using models developed by Dr. Peter Houghton, Ph.D. at the GCCRI.
- Dr. Peter Houghton will lead the research collaboration for GCCRI and is widely regarded as a leading expert in pediatric cancer research and in the development of novel approaches to treating childhood cancers.

DALLAS, Feb. 15, 2022 /PRNewswire/ -- Lantern Pharma (NASDAQ: LTRN), a Dallas-based clinical stage biopharmaceutical company using its proprietary artificial intelligence ("A.I.") platform to transform the cost, pace, and timeline of oncology drug discovery and development, today announced that it is expanding opportunities for its portfolio of drug candidates and A.I. drug discovery platform into additional rare pediatric cancers through a collaboration with **The Greehey Children's Cancer Research Institute (GCCRI) at the University of Texas Health Science Center at San Antonio (UTHSCSA)**. GCCRI is one of only two research institutions in the United States focused exclusively on pediatric cancer research and therapy development.

The research collaboration will focus on further validating findings from RADR® regarding the effectiveness of Lantern's LP-184 and LP-284 in genomically-defined pediatric cancers, including several without any effective therapeutic approach. The collaboration will initially leverage GCCRI's pediatric tumor research models and knowledge base to advance Lantern's drug candidate, LP-184, for the treatment of rare pediatric cancers including rhabdomyosarcoma, Ewing sarcoma, MRT (malignant rhabdoid tumor), Wilms tumor, and ATRT (atypical teratoid rhabdoid tumor). The **National Cancer Institute** describes several of these tumor types to have limited treatment options available, and many of these tumors continue to progress after standard therapy.

"Transforming the pace at which we develop new therapies for pediatric and rare cancers requires that we make constant use of data, advanced approaches and models, and machine learning to maximize the therapeutic potential of our portfolio. This collaboration with Dr. Houghton and his lab will help us potentially validate multiple new pediatric indications and also generate insights that may lead to new therapies, and all of this is being done at a fraction of the cost of traditional drug development." says Lantern Pharma's, President and CEO, Panna Sharma.

About the GCCRI and Dr. Houghton

The GCCRI is one of two research institutions in the United States solely dedicated to pediatric cancer research, with a mission to advance scientific knowledge in childhood cancers and to accelerate this knowledge to develop novel therapeutics. The research collaboration between Lantern Pharma and the GCCRI will be led by **Dr. Peter Houghton**, the former director of the GCCRI. Dr. Houghton has dedicated his career to developing scientific approaches to the understanding and treatment of pediatric cancers including sarcomas, low-grade gliomas, and ATRTs.

In response to the research collaboration, Dr. Houghton commented, "The Greehey Children's Cancer Research Institute is excited to partner with Lantern Pharma to test LP-184, a novel agent, to evaluate its antitumor activity against a broad range of preclinical pediatric models of sarcoma and to further its pediatric cancer development plan. The success of current therapies for treating advanced cancers in children is limited due to the development of drug resistance and a lack of novel agents. One of the main goals of GCCRI is to identify novel drugs that can be advanced to pediatric cancer trials. We have developed the most comprehensive preclinical models of pediatric solid tumors and leukemias to facilitate testing new agents and their clinical development."

An integral component of Dr. Houghton's research success has been the development and use of Patient-Derived Xenografts (PDX), which are clinically relevant cancer models that allow researchers to test novel therapeutics - such as LP-184 - in-vivo, and to directly study how tumors respond to treatment. Based on in-silico studies conducted by Lantern Pharma using the RADR® platform, LP-184 and LP-284 have the potential to address multiple pediatric cancers.

In January of 2022, Lantern Pharma announced that it had received Orphan Drug and Rare Pediatric

Disease designations for its experimental drug candidate LP-184 for the treatment of pediatric patients with ATRT, an aggressive and rapidly growing cancer of the central nervous system occurring primarily in children under 3.

International Childhood Cancer Research Day and ATRT

The announcement of the collaboration between Lantern Pharma and the GCCRI comes on International Childhood Cancer Research Day (ICCD). ICCD shines a spotlight on the over 400,000 children and adolescents diagnosed with cancer around the world each year. Cancer is the leading cause of childhood deaths, with a child dying of cancer every three minutes. Improving outcomes for these pediatric patients will require a global effort to provide more accurate diagnoses, innovative and effective treatment options, and community participation and support. This is especially true for children diagnosed with rare and ultra-rare cancers that have limited clinical research information and few to no treatment options available.

One such cancer is ATRT, which is a type of neurological tumor that primarily affects children under three. These clinically aggressive tumors have a median survival of 6-12 months and a low 5-year survival rate of 30%. The National Cancer Institute estimates that there are 600 living patients with ATRTs and 60 newly diagnosed cases each year. There is no standard of care treatment for children diagnosed with ATRTs, and patients have an imperative need for novel therapeutics to treat this cancer.

Lantern's Chief Scientific Officer, Dr. Kishor Bhatia stated, "International Childhood Cancer Day reminds us of both success in our abilities to fight pediatric cancer - as much as 80% are treatable - as well as existing gaps in this fight. Although many solid tumors in children are treatable, sub-groups with refractory tumors and poor prognosis require development of novel strategies as do several rare pediatric cancers. Our collaboration with GCCRI is particularly focused on addressing this gap and accelerating our path to targeted pediatric cancer trials."

Recent Developments with LP-184

Lantern Pharma's drug candidate LP-184 is a synthetic small molecule drug that preferentially damages DNA in cancer cells overexpressing specific biomarkers. LP-184 is currently in preclinical development for certain genomically-defined solid tumors, including ATRT, glioblastomas, and pancreatic cancer. In addition to potential use as a monotherapy, LP-184 has potential to be used as a synergistic agent in combination with other drugs. The collaboration between Lantern Pharma and the GCCRI will expand LP-184's development focus into additional pediatric cancers, and will examine opportunities for LP-184 as a mono- or combination therapy.

In early 2022, Lantern Pharma announced that it had received Rare Pediatric Disease and Orphan Drug Designations from the U.S. Food and Drug Administration (FDA) for Lantern's drug candidate LP-184 for the treatment of pediatric patients with ATRT. In obtaining these designations and establishing its collaboration with the GCCRI, Lantern Pharma is aiming to progress LP-184 for ATRT into a clinical trial in late 2022. In addition to

these recent FDA designations, LP-184 has also been granted Orphan Drug Designation for the treatment of **malignant gliomas** and **pancreatic cancer**.

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 eight 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; 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 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, 2020, filed with the Securities and Exchange Commission on March 10, 2021. You may access our Annual Report on Form 10-K for the year ended December 31, 2020 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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