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Lantern Pharma Reacquires Rights to Phase 2 Clinical Trial in Metastatic Prostate Cancer and Global Development & Commercialization of Irofulven (LP-100) from Allarity Therapeutics A/S

Irofulven (LP-100) is in an existing phase 2 clinical trial for patients with metastatic, castration resistant prostate cancer (mCRPC) that has enrolled 9 of 27 patients

Median overall survival (OS) for the initial group of 9 patients has been 12.5 months, which is an improvement over other similar fourth-line treatment regimens for mCRPC

Annually over $200 million is spent in the US, and nearly $700 million globally, for treatment for late-stage metastatic prostate cancer

Lantern is assessing the launch of additional human clinical trials in cancers with mutations in DNA damage repair genes for LP-100

Agreement terms include a payment to Allarity of US $1.0 million upfront, and an additional US $1.0 million over 24 months based on meeting development milestones, along with payments that can total an additional US $16 million based on regulatory filings and commercialization

DALLAS, July 27, 2021 /PRNewswire/ -- Lantern Pharma (NASDAQ: LTRN), a clinical stage biopharmaceutical company using its proprietary RADR® artificial intelligence ("A.I.") platform to transform the cost, pace, and timeline of oncology drug discovery and development, today announced it has entered into an Asset Purchase Agreement to reacquire global development and commercialization rights for Irofulven (LP-100) from Allarity, formerly known as Oncology Venture. This transaction includes global rights to the clinical stage drug candidate Irofulven (LP-100), as well as the developed clinical protocol for an intended study in bladder and prostate cancer patients who have a mutation in the ERCC2/3 genes. Lantern also received an exclusive license to use Allarity's companion diagnostic in future development and commercialization of LP-100. Lantern will assume full authority to manage and guide future clinical development and commercialization of the drug

candidate.

"Based on the promising initial survival data, and the new observations on LP-100's efficacy in cancers with DNA repair deficiency, regaining the rights and future control of the program will increase Lantern's strategic flexibility regarding drug-development, and greatly increase the potential upside to Lantern from future successful development of LP-100," said Panna Sharma, President and CEO of Lantern Pharma. "This program is very synergistic with our other drug candidates that are also focused on DNA damage repair and the NER pathway. Most importantly, LP-100 has the potential to be an important compound — either as monotherapy or in combination — for several challenging cancers that are impacting patients globally. We are looking forward to advancing the LP-100 program using our data-driven and precision medicine approach."

In the current Phase 2 trial, being conducted in Denmark, 9 patients, out of a targeted enrollment of 27, have been treated based on meeting criteria established by Allarity's DRP® (Drug Response Predictor) companion diagnostic technology. The current Irofulven clinical trial seeks to evaluate the anti-tumor effect after treatment of Irofulven in combination with prednisolone in patients who progressed on androgen receptor (AR)-targeted therapy and docetaxel-pretreated metastatic castration-resistant prostate cancer patients. Results from the initial 9 patients have shown a median overall survival (mOS) of 12.5 months, which is substantially greater than other 4th line (and later) regimens of metastatic castration-resistant treatment that have generated mOS ranging from 7.1 to 9.9 months. Based on this improvement in overall survival, and other observations from discussions with study investigators, Lantern will be working with clinical trial investigators and sites to evaluate further enrollment. Lantern will also be considering other improvements, guided by data and publications, suggesting enhanced efficacy of LP-100 in tumors with mutations in certain DNA repair genes. Lantern believes that using DNA repair gene mutations or deficiency as an additional selection criteria has the potential to enhance the selection of patients that can respond to and benefit from LP-100 therapy and further improve mOS.

Analysts at GlobalData estimate that there were over 42,900 cases of metastatic castration-resistant prostate cancer in the US during 2020, and over 170,000 cases globally. Approximately 25-30% of these patients in the US and globally, need treatment options in

the third-line setting, or later and have the potential for treatment with LP-100 once approved as a therapeutic in this setting. In addition, approximately 25-30% of all metastatic prostate cancers have been observed to have mutations in DNA repair genes in multiple meta-analysis of the disease.

According to Sharma, "Our goal is to build upon the existing trial in metastatic castration-resistant prostate cancer patients and evaluate additional launches in other cancers with mutations in ERCC2/3, BRCA, PTEN, ATM, and other DNA-repair pathway genes. Several studies have shown efficacy of LP-100 and LP-184 in these pathways, especially in prostate and bladder cancers. Having both of these drug candidates in our portfolio is synergistic and allows us to develop several options towards a potentially approved therapeutic in cancers with significant unmet need for tens of thousands of patients annually."

LP-100 was initially revitalized by Lantern and its founders using a genomic and data-driven approach to uncover those cancers that were most sensitive to LP-100, and then focusing on the genomic features of the prostate cancers that showed the most sensitivity to the compound. According to Sharma, "Bringing LP-100 back to Lantern is the best path for the future development of this drug candidate allowing for a hybrid approach that combines real-world patient genomics and data-driven drug development."

Under the terms of the Asset Purchase Agreement, Lantern will pay an initial upfront amount of US $1.0 million, and future escrow payments that have the potential to deliver an additional US $1.0 million to Allarity based on drug manufacturing and trial enrollment milestones within the next 24 months. Allarity is also eligible to receive up to US $16 million in additional milestone payments over the life of the program based on IP license milestones and regulatory filings and approvals in the US and EU, and low- to mid-single-digit royalties on future commercial net sales.

"We are looking forward to further developing and extending the potential of LP-100 for cancer patients, and this agreement allows us to provide additional focus and resources on defining this drug candidate's role in both prostate and other DNA repair deficient cancers. We are encouraged by the initial observations from the first 9 patients, and we believe these observations support further study of LP-100 in terms of the role it might play in the battle to extend survival in late stage prostate cancer patients," stated Panna Sharma, CEO of Lantern Pharma.

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About Lantern Pharma

Lantern Pharma (LTRN) is a clinical-stage oncology-focused biopharmaceutical company leveraging its proprietary RADR® A.I. platform and machine learning 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 seven 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. More information is available at: www.lanternpharma.com and Twitter @lanternpharma.

Forward-looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the United States Securities Act of 1933, as amended, and Section 21E of the United States Securities Exchange Act of 1934, as amended. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside of Lantern's control and which could cause actual results to differ materially from the results discussed in the forward-looking statements. These forward-looking statements include statements concerning Lantern's plans, objectives, goals, future events, performance and/or other information that is not historical information, including among other things, statements relating to: future events; strategic plans to develop and advance Irofulven (LP-100); potential future clinical testing and treatment indications for Irofulven (LP-100); and estimates regarding potential markets and potential market sizes. There are a number of important factors that could cause 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 clinical testing and development of Irofulven (LP-100) may not be successful and may not yield meaningful results, (iii) the risk that Irofulven (LP-100) may not receive future regulatory marketing approval or otherwise become a commercial product, and (iv) those other factors set forth in the Risk Factors section in Lantern's 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 Lantern's Annual Report on Form 10-K for the year ended December 31, 2020 under the investor SEC filings tab of Lantern's website at www.lanternpharma.com or on the SEC's website at www.sec.gov. Given these risks and uncertainties, Lantern can give no assurances that such forward-looking statements will prove to be accurate, or that any other results or events projected or contemplated by such forward-looking statements will in fact occur, and investors are cautioned not to place undue reliance on these statements. All forward-looking statements in this press release represent the judgment of Lantern as of the date hereof, and, except as otherwise required by law, Lantern disclaims any obligation to update any forward-looking statements to conform the statement to actual results or changes in its expectations.

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