UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 29, 2020

Lantern Pharma Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-39318**	**46-3973463**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1920 McKinney Avenue, 7th Floor Dallas, Texas	**75201**
(Address of Principal Executive Offices)	(Zip Code)

(972) 277-1136
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act: Common Stock

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, $0.0001 par value	LTRN	The Nasdaq Stock Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☑

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition.

On October 29, 2020, Lantern Pharma Inc. (the "Company") will issue a press release announcing its financial results for the third quarter endecSeptember 30, 2020. A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The information in this Item 2.02, including Exhibit 99.1 hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filings under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filings, unless expressly incorporated by specific reference in such filing.

Item 7.01 Regulation FD Disclosure.

On October 29, 2020, the Company will utilize a presentation to assist with the Company's discussions during a conference call and live webcast hosted by the Company to discuss financial and operating results for the third quarter ended September 30, 2020. A copy of the presentation is furnished as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference.

The information in this Item 7.01, including Exhibit 99.2 hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filings under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filings, unless expressly incorporated by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Exhibit Description
99.1	Press Release dated October 29, 2020 announcing financial results for quarter ended September 30, 2020.
99.2	Presentation relating to October 29, 2020 conference call and live webcast to discussfinancial and operating results for quarter ended September 30, 2020.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Lantern Pharma Inc.,
A Delaware Corporation

Dated: October 29, 2020

By: */s/ David R. Margrave*
David R. Margrave, Chief Financial Officer

Exhibit 99.1

Lantern Pharma Reports Third Quarter 2020 Financial Results & Continued Operational Progress

- Surpassed One Billion Curated Data Points Powering Company's Proprietary A.I. Platform, RADR®, for Cancer Drug Development
- Advanced LP-184 as a Potential Treatment for Glioblastoma, by Confirming its Ability to Effectively Penetrate the Blood Brain Barrier (BBB) in a 3D Model
- Accelerated Development of LP-184 for Prostate and Pancreatic Cancers through Collaborations with Fox Chase Cancer Center and Georgetown University
- Advanced Manufacturing & Product Development for LP-300 Phase 2 Clinical Trial in Non-Small Cell Lung Cancer in Never Smokers

DALLAS, TX – October 29, 2020 – Lantern Pharma Inc. (NASDAQ: LTRN), a clinical stage biopharmaceutical company using its proprietary artificial intelligence ("A.I.") platform, *RADR®* , to transform oncology drug discovery and development, today announced financial results for the third quarter ended September 30, 2020.

Panna Sharma, CEO and President of Lantern Pharma, stated, "We have been extremely focused on advancing our portfolio of compounds, increasing the functionality, capabilities and data powering our A.I. platform, while also strengthening our team with cancer biologists, data scientists and drug development professionals who share our passion to transform oncology drug development."

Lantern has three drug compounds in development where genomics and data-driven methods have been used to refine and accelerate the development process:**LP-100** in a Phase 2 trial for the treatment of metastatic, hormone-refractory prostate cancer (MHRPC), which is partnered with a European biotech; **LP-300** which is preparing to enter into a Phase 2 trial for non-small cell lung cancer (NSCLC) as a combination therapy; and **LP-184** which is in preclinical development for genomically defined cancers, including prostate, pancreatic and glioblastoma multiforme (GBM).

Mr. Sharma also commented, "Our proprietary RADR® platform recently surpassed one billion data points – which is roughly four times the amount of data since our June IPO. The data is comprised largely of genomic, transcriptomic and drug sensitivity datapoints that have been thoughtfully curated from both our own studies and from relevant published studies and cancer data sets. RADR® was essential in helping determine that GBM, a particularly deadly form of brain cancer, should be a key focus in our portfolio development. Additionally, RADR ® has significantly accelerated the process of developing an initial signature that could be used to identify GBM patients, potentially resulting in a new more effective treatment and in uncovering sub-types of GBM in which our compound can be most effective. Our growing A.I. platform will be pivotal in uncovering potential new therapeutic opportunities and also in developing insights into the creation of combination-therapy programs."

During the third quarter, Lantern also announced drug development and research collaborations with two leading academic and translational research cancer centers, Fox Chase Cancer Center in Philadelphia and Georgetown University in Washington D.C. These collaborations are focused on advancing LP-184 in specific, genomically defined sub-types of pancreatic and prostate cancer. The focus of both collaborations is to provide critical insights for the design of our upcoming clinical testing for LP-184. The data and results from these collaborative studies will provide data that will advance the development of biomarker signatures and aid in defining the patient groups most likely to benefit from our therapies.

Corporate and Scientific Highlights

- RADR® surpassed one billion curated data points which will help further enhance our ability to better understand the mechanisms of action behind drugs and drug classes being used as anti-cancer agents and help determine signatures that correlate to drug response. The milestone was reached ahead of schedule and enables new capabilities such as the ability to identify and suggest combination therapy programs and the ability to compare and contrast signatures generated by a variety of machine learning algorithms.

- The Company launched the next phase of a collaboration with Georgetown University for LP-184, a next-generation, targeted DNA-damaging agent. The first stage of the joint research activities began in the fourth quarter of 2019 and generated compelling evidence of activity of LP-184 in solid tumors that overexpress PTGR1. LP-184 anti-tumor activity can be linked to the over-expression of PTGR1 and will be further validated in the ongoing collaboration in specific sub-types of prostate cancer. The research is also expected to help guide the development of a signature that correlates to increased response among certain sub-types of metastatic and metastatic, hormone-refractory prostate cancer.

- The Company initiated a collaboration and research agreement with Fox Chase Cancer Center for the further development of Lantern's LP-184 in pancreatic cancer. This collaboration advances the targeted use of LP-184 in genetically defined sub-types of pancreatic cancer with the development of biologically relevant and robust gene signatures to be used in upcoming clinical testing. If successful, LP-184 could provide, in the future, pancreatic cancer patients a personalized therapy option that has the potential to improve survival.

- LP-300 development was advanced in preparation for a Phase 2 clinical trial in non-small cell lung cancer (NSCLC) among never-smokers during 2021. The Company entered into discussions with key opinion leaders in NSCLC to refine the patient selection and treatment regimen decision criteria that are expected to guide discussions with the FDA. In addition, the Company began selection of clinical trial sites and potential investigators for the ongoing development of LP-300 as a potential first-in-class combination therapy for never smoking (or non-smoking) NSCLC patients with histologically defined adenocarcinoma. Lantern also established a manufacturing network and process for GMP production in preparation for its Phase 2 clinical trial of LP-300.

- The Company conducted in vitro validation studies demonstrating the ability of LP-184 to penetrate the Blood Brain Barrier (BBB) while preserving neuronal cell viability. A critical property of any drug for GBM is its ability to penetrate the blood brain barrier without causing damage to the nerve cells and tissue. These studies validated the in-silico generated results (from Q1, 2020) that demonstrated that LP-184 would have a BBB permeability equivalent to temozolomide and other drugs being used for GBM patients. LP-184 demonstrated significant permeability to BBB, in-line with existing standard of care agents and in the expected range of nanomolar potency. The Company will be providing additional details on this data, the biomarker signature, and the IND-enabling studies involved in the clinical trial process during Q4 2020.

Third Quarter Financial Highlights

- **Cash Position:** Cash and cash equivalents were $20.8 million as of September 30, 2020, compared to $1.2 million as of December 31, 2019. The increase was primarily due to proceeds from the IPO in June 2020.

- **R&D Expenses:** Research and development expenses were $600,769 for the quarter ended September 30, 2020, compared to $228,401 for the quarter ended September 30, 2019. The increase was primarily attributable to increases in drug candidate research studies and manufacturing related expenses and expansion of the Company's research team.

- **G&A Expenses:** General and administrative expenses were $1,100,719 for the quarter ended September 30, 2020, compared to $441,251 for the quarter ended September 30, 2019. This increase was primarily due to an increase in expenses associated with transitioning to and becoming a public company.

- **Net Loss:** Net losses were $1,701,488 for the quarter ended September 30, 2020, or $0.27 per share, compared to a net loss of $669,652 for the quarter ended September 30, 2019.

Mr. Sharma continued, "We are changing the pace, risk and cost of oncology drug discovery and development. The high failure rate and protracted development process lead to development costs in oncology that are not sustainable for our health-care system or for patients globally. A.I. and large scale machine-learning enabled systems that can leverage real-world oncology data and biomarker driven approaches offer the tremendous potential of a more sustainable route and one that can lead in the transformation of oncology drug development to benefit patients and advance medicine."

Conference Call

Lantern Pharma will host a conference call and webcast today, Thursday, October 29 at 4:00 p.m. ET.

Conference Call & Webcast Details

- Toll-free Domestic & Canada: 866.342.8588 – conference ID 55977

- International: 203-518-9865 – conference ID 55977

- US and Canada callers one touch dial: +1.866.342.8588,,55977#

- Live (audio-only) webcast and related presentation materials will be accessible via a weblink athttps://www.webcaster4.com/Webcast/Page/2460/38336.

Web participants should register 15 minutes prior to the start of the call. The webcast will be archived on the Lantern Pharma website for 30 days.

Replay Details

A replay of the conference call will be available for replay until 11:59 pm ET November 29, 2020.

- Replay Number: 1-800-925-9932 - passcode 55977.

About Lantern Pharma

Lantern Pharma (Nasdaq: 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 Twitter @lanternpharma.

Contact

Marek Ciszewski, JD
Director, Investor Relations
628-777-3167
IR@lanternpharma.com

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; estimates regarding the development timing for our drug candidates; 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 the impact of the COVID-19 pandemic, the results of our clinical trials, and the impact of competition. Additional factors can be found 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.

Condensed Consolidated Balance Sheets

	September 30, 2020 (unaudited)	December 31, 2019
CURRENT ASSETS		
Cash	$ 20,802,542	$ 1,232,030
Prepaid expenses and other current assets	1,672,802	788
Total current assets	22,475,344	1,232,818
Property and equipment, net	17,608	8,758
Deferred offering costs	-	191,000
TOTAL ASSETS	$ 22,492,952	$ 1,432,576
CURRENT LIABILITIES		
Accounts payable and accrued expenses	$ 814,557	$ 489,292
Total current liabilities	814,557	489,292
Loan payable	108,500	-
TOTAL LIABILITIES	923,057	489,292
STOCKHOLDERS' EQUITY		
Preferred Stock - Par Value (1,000,000 authorized at September 30, 2020; 3,480,000 authorized at December 31, 2019; $.0001 par value) (Zero shares issued and outstanding at September 30, 2020; 2,438,866 shares issued and outstanding at December 31, 2019)	-	244
Common Stock – Par Value (25,000,000 authorized at September 30, 2020; 12,180,000 authorized at December 31, 2019; $.0001 par value) (6,217,577 shares issued and outstanding at September 30, 2020; 1,978,269 shares issued and outstanding at December 31, 2019)	622	198
Additional paid-in capital	31,333,164	7,694,547
Accumulated deficit	(9,763,891)	(6,751,705)
Total stockholders' equity	21,569,895	943,284
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 22,492,952	$ 1,432,576

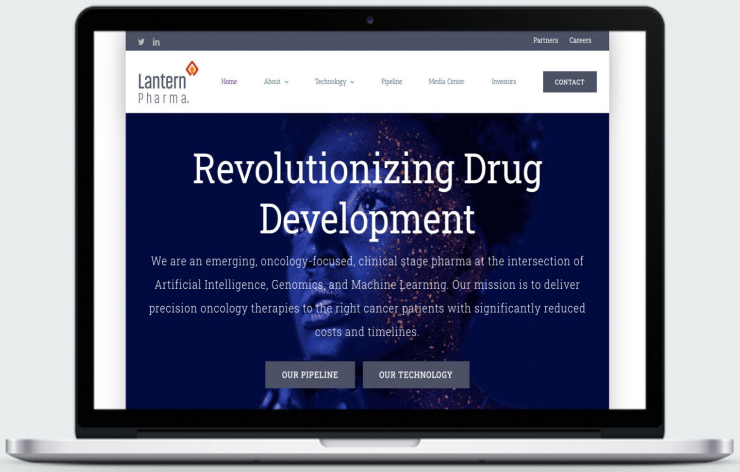
Condensed Consolidated Statements of Operations (Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	**2019**	**2020**	**2019**
Operating expenses:				
General and administrative	1,100,719	441,251	2,117,290	977,300
Research and development	600,769	228,401	894,896	775,718
Total operating expenses	1,701,488	669,652	3,012,186	1,753,018
NET LOSS	$ (1,701,488)	$ (669,652)	$ (3,012,186)	$ (1,753,018)
Net loss per share of common shares, basic and diluted	$ (0.27)	$ (0.34)	$ (0.82)	$ (0.89)
Weighted-average number of common shares outstanding, basic and diluted	6,217,577	1,978,269	3,661,942	1,978,269

Lantern Pharma®

Third Quarter 2020

Operating & Financial Results Conference Call



https://ir.lanternpharma.com/

OCTOBER 29, 2020
4 PM Eastern

FORWARD-LOOKING STATEMENTS

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Lantern Pharma

Third Quarter 2020

Operating and Financial Results
Conference Call

KEY TOPICS

1. Business Overview & Background
   Panna Sharma, CEO

2. Financial Results & Highlights
   David Margrave, CFO

3. Details on RADR Achieving 1 Billion
   Panna Sharma, CEO

4. Future Milestones & Outlook
   Panna Sharma, CEO

5. Q&A Session

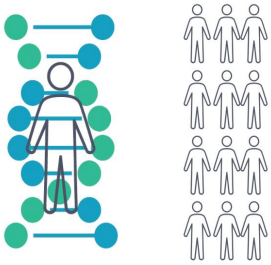
Lantern leverages A.I. to rescue and develop cancer therapies and has the potential to transform the cost, risk and timeline of drug development

Failed or Abandoned Drug Assets

Drugs that have failed clinical trials or have been abandoned by pharma and biotech companies in late stage trials

RADR®

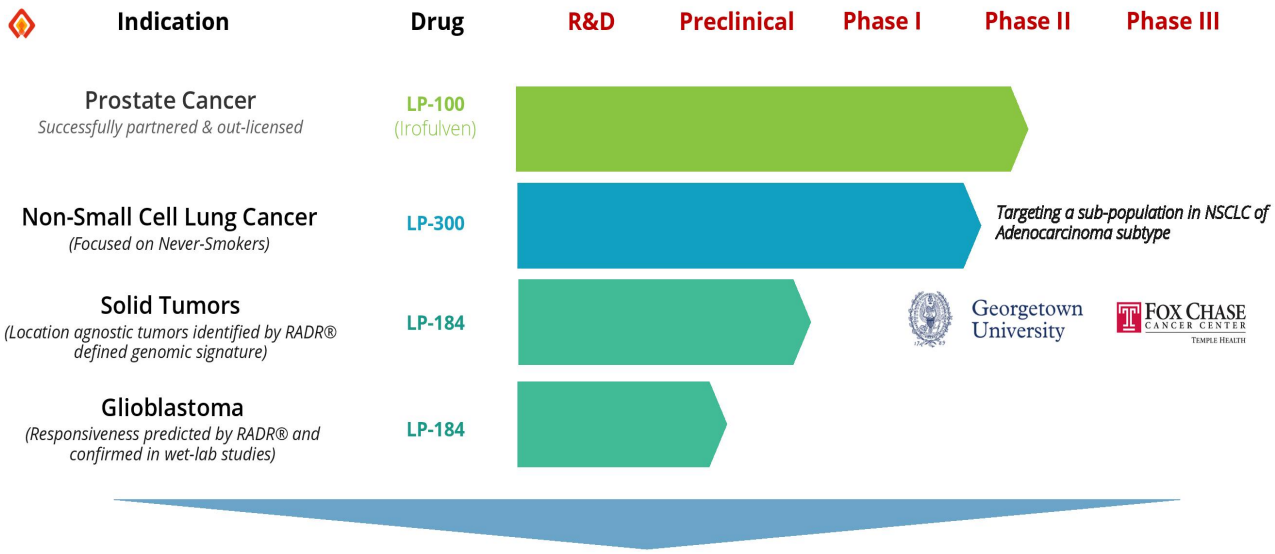
- Big data (genomic, clinical, response) assembled and analyzed
- Patient subgroups identified through machine learning and artificial intelligence
- Mechanisms of action clarified
- Potential combinations identified
- Potential for faster and more efficient path to relaunching in the clinical trial setting



Responders Non-Responders

- Patient stratification based on A.I. enabled genomic biomarker discovery
- New patient populations for failed or abandoned drugs based on validated biomarker signatures
- Aimed to shorten time to market
- Designed to reduce risk in development
- Potential for orphan or fast track status
- New Chemical Entities designed and filed

Lantern's Unique & Rapidly Developing Pipeline



Accelerated Development by Leveraging the RADR® A.I. platform

106 issued patents and 8 pending applications across 14 patent families

Summary Results of Operations (Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	**2019**	**2020**	**2019**
Operating expenses:				
General and administrative	1,100,719	441,251	2,117,290	977,300
Research and development	600,769	228,401	894,896	775,718
Total operating expenses	1,701,488	669,652	3,012,186	1,753,018
NET LOSS	**$ (1,701,488)**	**$ (669,652)**	**$ (3,012,186)**	**$ (1,753,018)**
Net loss per common share, basic and diluted	$ (0.27)	$ (0.34)	$ (0.82)	$ (0.89)
Weighted Avg. Common Shares Outstanding - Basic and Diluted	6,217,577	1,978,269	3,661,942	1,978,269

Balance Sheet Highlights & Summary

	09/30/2020 *(Unaudited)*	12/31/2019
Cash	**$ 20,802,542**	**$1,232,030**
Prepaid Expenses & Other Current Assets	$1,672,802	788
Total Assets	**$ 22,492,952**	**$ 1,432,576**
Total Liabilities	**$ 923,057**	**$ 489,292**
Total Stockholders' Equity	**$ 21,569,895**	**$ 943,284**

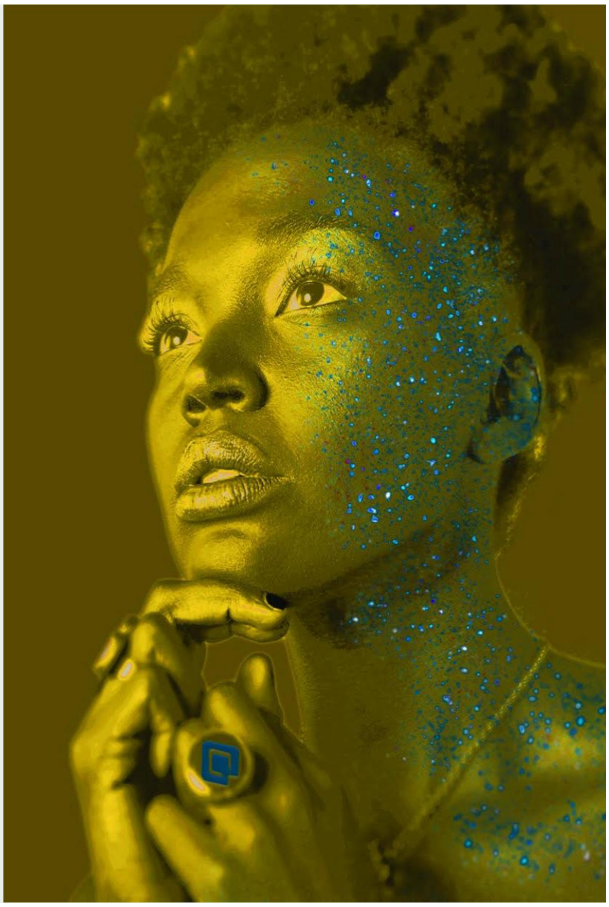
Cash position of $20.8 million as of quarter end provides a strong financial platform, that we anticipate will allow us to support and fuel our business model and growth strategy through at least mid-2022.

Entering "The Golden Age of A.I."

10 Mega-Trends Setting The Stage for A.I. Led Transformation in Drug Development & Medicine

- Large-scale, relevant and readily available data-sets
- Methods, technologies and algorithms that are massively scalable
- Computing, storage and transmission continue exponential advances
- Rapid rise of global talent and collaboration networks
- Tremendous increase in quality of biological data and methods
- Rise of sequencing as a highly available, on-demand, low-cost service
- Consumers willing to share personal data in near-time
- Industries that have an increasing impetus to transform
- New generation of investors demanding novel value creation
- Executives and entrepreneurs rewarded for rapid change

Lantern is at the forefront of this model of A.I. driven transformation in the area of personalized oncology drug development to drive value for cancer patients and our investors.

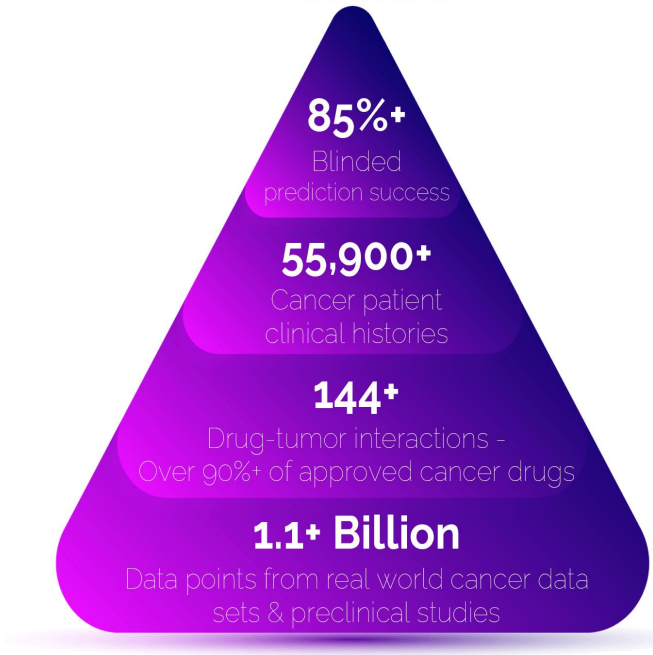


Precision Medicine Platform

RADR® rapidly identifies genetic & biomarker signatures for precision oncology drug development, clinical response prediction and CDx (companion diagnostic) enablement.

We continue to invest in the platform's functionality, scale, and volume of data.

RADR® Platform Key Features & Architecture



RADR® Platform Continues to Grow in Volume and Functionality

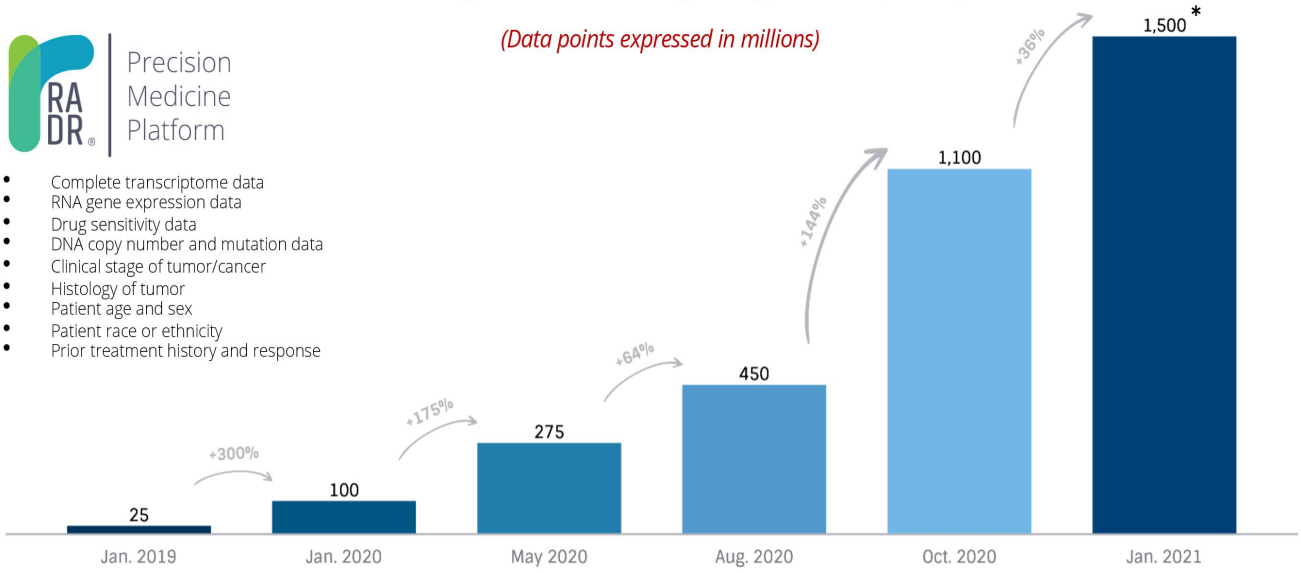
Growth in Data Drives Growth in Capabilities

The Data Powering our AI Platform has grown by **45x** in the past 7 quarters

(Data points expressed in millions)

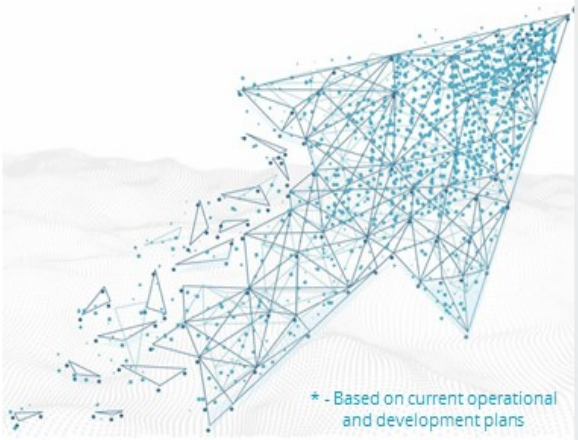
RADR Precision Medicine Platform

- Complete transcriptome data
- RNA gene expression data
- Drug sensitivity data
- DNA copy number and mutation data
- Clinical stage of tumor/cancer
- Histology of tumor
- Patient age and sex
- Patient race or ethnicity
- Prior treatment history and response



* Expected amount of data based on development plan and pipeline

Precision Medicine Platform



* - Based on current operational and development plans

10 Million >	125 Million >	1 Billion >	3 Billion* >	6 Billion* >
2018	2019	2020	2021	2022

Curated Data Sources Include:

- *Historical Trials*
- *Proprietary Internal Studies*
- *Studies & Collaborations w/ Partners*
- *Active Clinical Trials*
- *Trials in adjacent drug classes and tumors*
- *Proprietary Sequencing Campaigns*
- *Proprietary Drug Sensitivity Studies*
- *Open Sources from Publications and Research*
- *Clinical Outcome & Lab Data From Select Groups*

The RADR® Platform Enables...

Scientific Value +

- ✓ Rapid identification of potential compounds to rescue and develop
- ✓ Improved and more nuanced understanding of responder groups, and non-responder groups based on biological networks
- ✓ Feedback for potential mechanisms to be exploited in target-based development activity

Patient Value +

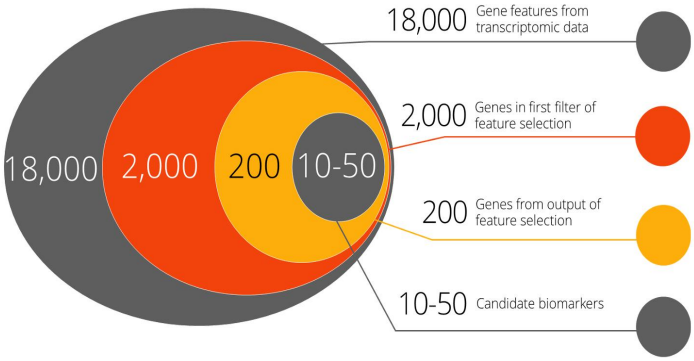
- ✓ More rapid entry into clinical trials and patient subgroups
- ✓ Robust companion diagnostics that can be used to accelerate trials and commercial traction
- ✓ Potential for improved patient outcomes with drastically reduced costs and economic burden

Precision Medicine Platform

RADR® automates machine-learning approaches in generating a biomarker based response signature that can be **used throughout the lifecycle of therapy development:**

1. Preclinical modeling and studies
2. Clarifying mechanisms of action
3. Launching a robust companion diagnostic (CDx).
4. Identifying additional potential combination drugs or therapies

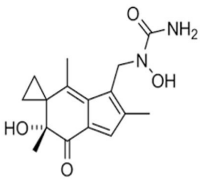
Biomarker Signature is Based on Statistical Significance and Biological Relevance



Output & Signature Development Process

Collaboration Focused on Pancreatic Cancer for LP-184

Structure of LP-184



FOCUS:
The Fox Chase collaboration is focused on advancing the targeted use of LP-184 in molecularly defined sub-types of pancreatic cancer.

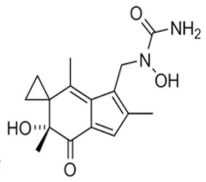
GOAL:
The goal of the collaboration is to create a more biologically relevant and robust gene signature in preparation for future clinical trials, enabling pancreatic cancer patients to potentially benefit from a more effective and personalized cancer therapy. Initial results expected in early Q1, 2021.

LEAD INVESTIGATOR:
The research will be led by Igor Astsaturov, MD, Ph.D., an internationally-recognized researcher in gastrointestinal cancers at the Molecular Therapeutics Program at Fox Chase where he specializes in investigating signaling pathways that inform the choice of biomarkers and innovative therapy combinations in clinical trials. Dr. Astsaturov is known for his research in a number of cancer indications spanning pancreatic, stomach, liver, and several others, as well as his belief that each individual cancer patient will soon be defined by the molecular makeup of their cancer cells.

Collaboration Focused on Prostate Cancer for LP-184

GEORGETOWN UNIVERSITY

Structure of LP-184



BACKDROP:
The first phase of the joint research activities with Georgetown which began in the 4th quarter of 2019 generated strong evidence of the efficacy of LP-184 in certain solid tumors and linked the anti-tumor activity to the presence of specific biomarkers. Phase one of the collaboration was a proof of concept study that demonstrated LP-184 had nanomolar potency across a wide variety of cell lines specifically engineered to study prostate cancer. LP-184 demonstrated increased efficacy in killing prostate cancer cells that overexpress PTGR1, a gene that is often upregulated in aggressive cancer tumors as well as higher anti-cancer activity in cells lines that had targeted DNA damage repair gene mutations.

GOAL:
The next phase of the collaboration and research program with Georgetown will focus on a larger set of PDX models and help pinpoint the specific mechanism of action, and seek confirmatory validation of the role of PTGR1 and the genetic mutations driving the DNA damage repair pathways that make the drug highly potent in these cancers. Research will also focus on completing the acquisition of detailed genomic information in prostate cancers, which will involve work in animal models and cell lines that have been edited to under and over express key driver genes. The goal of phase two of the collaboration is to create a more biologically relevant and robust gene signature in preparation for clinical trials, with the objective of allowing future prostate cancer patients to experience the benefit of a more personalized cancer treatment approach. Ultimately, Lantern's A.I. driven approach could save millions of dollars in drug development costs while significantly accelerating the path to commercialization.

LEAD INVESTIGATOR:
The research is being led by Partha Banerjee, Ph.D., a world-renowned expert in molecular oncology and prostate cancer, and lead investigator for LP-184 at Georgetown University

Key Value Building Objectives

Foundational Year
Advance Platform
Prepare Trial Launches
Prioritize Additional Compounds

4th Quarter 2020 & Early 2021

- Advances for launch of LP-184 IND-Enabling studies
- Data from collaborations w. Georgetown & Fox Chase
- Results from preclinical work & BBB in Glioblastoma w/ LP-184
- FDA related activity to explore launch of Phase 2 for LP-300 for never-smokers
- Potential addition of new drug candidates / programs
- Validate signature for LP-184 to design pan-tumor clinical studies and trial
- Grow RADR® A.I. Platform beyond 1 billion data points & Showcase Platform During an "Analyst Day"

Multiple Streams of Value Creation
Launch Multiple Precision Trials
Leverage Platform for Pharma Partners
Secure Additional Compounds

2021-22

- Readout from targeted Ph. 2 trial in Europe in prostate cancer by first half of 2021 with LP-100
- Launch Ph. 2 clinical trial for LP-300 in NSCLC (never-smokers) by mid 2021
- Launch Ph. 1 clinical trial for LP-184 in solid tumors
- Launch Ph. 1/2 clinical trial for LP-184 in GBM
- Explore potential combinations for LP-184 & LP-300 with other existing approved drugs (inc. I-O agents)
- Strategically grow RADR® A.I. Platform beyond 1 Billion data-points
- Big pharma partnership and collaboration on drug rescue, repurposing or development

Upcoming Conference & Presentation Schedule

11/18/20	Benchmark Discovery One-on-One Conference
12/9/20	Benziga Global Small Cap Conference

Lantern Pharma

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Unless otherwise noted, all events are virtual and based on confirmed registration and subject to the policies of the event organizer.

Q & A

LTRN Operating & Financial Results Call
OCTOBER 29, 2020