Lantern Pharma
Company Overview
October 7, 2020

Leveraging A.I., Machine Learning & Genomics to Rescue, Repurpose and Develop Targeted Cancer Therapies
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

• This presentation 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 the drug development process 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 words such as “targets,” “objectives” (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 presentation 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.
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.

- 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

RADR®

- 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
Current oncology drug development is costly, risky, and inefficient…a perfect problem area for artificial intelligence & machine learning.

Challenges in drug development…

- **3.4%**
  - Avg. success rate of oncology drugs

- **$1B+**
  - Average developmental cost per oncology drug

- **17,000+**
  - Oncology trials conducted from 2001-2015

- **2X**
  - Success rate of oncology trials using biomarker

...are being met by data-driven, and A.I. approaches

There is a critical need to rescue drugs that failed or bring abandoned therapeutic assets to market in order to create ROI for biopharma.

"...low efficacies of cancer drugs might be attributed to the heterogeneity of the tested patient population, which essentially dilutes the strong therapeutic effect that a drug might have on a specific patient subgroup."

Thiebault Geoux, Ph.D.
Chemistry - Elsevier 11/9/2015

"The ever-increasing catalog of genetic changes involved in cancer development is fueling a new generation of targeted drugs that are designed to address specific weaknesses in tumor cells. But these drugs will only work in a subset of patients – creating a demand for genetic stratification."

Allison Halliday, Ph.D.
Cancer Research, 01/31/2020
Cancer Biomarkers: Powering Precision Medicine
Solving unmet needs and creating opportunities in personalizing cancer therapy by capitalizing on emerging technologies and industry trends

Mega Trends Shaping Drug Development

1. Increased access to validated genomic & biomarker data
2. Increased sharing and collaboration globally among research groups, industry consortiums and companies
3. Rapidly decreasing cost (and increasing quality) of sequencing and biomarker data and other health-monitoring data
4. Rapid evolution & implementation of A.I. and machine learning technologies
5. Availability of well tolerated and clinically active but failed or abandoned compounds
6. Economic pressure to reposition & rescue drug investments
7. Rising need to develop and manage combination and drug-resistance addressing therapies
8. Increasing use of precision medicine and genomics to identify, treat and manage patients
Drug discovery and development driven by A.I. is a rapidly growing market in response to fundamental shifts in the industry and a re-tooling of R&D.

Global A.I. Healthcare Market*

- 2016: $760M
- 2024: $10B

A.I.-driven Drug Discovery/Development market in 2024: ~$4B

*Source: Biopharmatrend.com, PMLIVE, and Global Market Insights, Inc.
Lantern’s focus on oncology, and advancing the portfolio where we own the therapeutic rights makes us uniquely positioned and differentiated.

Scalable, Unique Artificial Intelligence Platform – RADR®

- 500+ Million datapoints covering over 140+ drug/tumor interactions
- Validated in multiple case studies with over 80%+ blinded accuracy
- Integration of real-world, patient data from thousands of patients
- Active collaboration with NCI in oncology therapeutics
- Use of genomic, transcriptomic, clinical and drug sensitivity data
- Guides development of patient stratification and CDx strategy
- Published posters and studies at ASCO and AACR (2018, 2019, 2020)
- Helped drive first out-licensing deal for LP-100 for up to $14 Mn

Rapidly Accelerating Our Portfolio Value

1. Guided the genetic signature to determine patient response for LP-100 which was out-licensed within one year.
2. Uncovered potential mechanisms of action for LP-300 – which has shown notable and statistically significant results in prior trials, (with certain patient populations) but failed to meet broader endpoints.
3. Highlighted potential pathways and genes involved in both the response to LP-184 and the biological mechanisms that are involved in activity across multiple tumors.
4. Identified potential new candidates for rescue, repurposing and in-licensing.
5. Generated new potential combination therapies with approved drugs that can be accelerated through our drug development process.
Lantern's powerful A.I. platform is being developed with a pure focus on predicting drug outcome and drug response using a depth of interrelated biomarker and clinical data, including:

- 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

* Historical datapoints are approximate and based on end of year analysis
** Future datapoints are based on Company's product development plans
## Lantern’s Unique & Rapidly Developing Pipeline

<table>
<thead>
<tr>
<th>Indication</th>
<th>Drug</th>
<th>R&amp;D</th>
<th>Preclinical</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate Cancer <em>Successfully partnered &amp; out-licensed for up to $14M</em></td>
<td>LP-100  (Irofulven)</td>
<td></td>
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<td></td>
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<tr>
<td>Non-Small Cell Lung Cancer <em>(Never-Smokers)</em></td>
<td>LP-300</td>
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<tr>
<td>Solid Tumors <em>(Location agnostic tumors identified by RADR® defined genomic signature)</em></td>
<td>LP-184</td>
<td></td>
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<td></td>
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<tr>
<td>Glioblastoma</td>
<td>LP-184</td>
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</table>

*Built on a foundation of 108 issued patents, and 7 pending applications across 14 patent families*
Nearly 1 M patients annually worldwide with several Billion $USD in potential future oncology therapy sales

3 Drug Candidates in Development in Targeted Patient Segments With Clinical Need

- **Prostate Cancer**
  - **1.3 million**
    - 2018 Estimated Global Incidence
  - **208,000**
    - 2018 Estimated Global metastatic hormone-resistant prostate cancer subpopulation

- **Ovarian, Pancreatic & Liver Cancer**
  - **1.6 million**
    - 2018 Estimated Combined Global Incidence
  - **400,000**
    - 2018 Estimated Global cancer subpopulation non-responsive to or relapsed after chemotherapy and with potential biomarker signature for response

- **Glioblastoma (GBM)**
  - **240,000+**
    - 2018 Estimate of new GBM cases globally
  - **11,000-13,000**
    - 2019 estimated GBM Cases in the USA

- **Non-Small Cell Lung Cancer (NSCLC)**
  - **2 million**
    - 2018 Estimated Global Incidence
  - **240,000+**
    - 2018 Estimated Global never-smoker NSCLC adenocarcinoma subpopulation

Sources: American Cancer Society, Global Database, AANS, NCI, Lantern Pharma meta analysis
Overview of Lantern’s Small Molecule Portfolio

**LP-100, Irofulven**
- DNA Damaging Agent
- Mediates cytotoxicity through multiple mechanisms such as DNA adduct formation, RNA polymerase stalling and redox protein modification
- Actively enrolling in a precision medicine, genomic-signature guided Phase II trial (NCT03643107) for metastatic, castration-resistant prostate cancer (mCRPC)

**LP-300**
- Disulfide bond disrupting agent with cysteine modifying activity on select proteins (ALK) and modulator of protein function (EGFR, MET, ROS1)
- Chemosensitizer for combination therapies by inactivating proteins modulating cell redox status and drug resistance (TRX, GRX, PRX)
- Chemoprotectant activity that reduces toxicities associated with taxane/ platin-based chemotherapies

**LP-184**
- Novel DNA Damaging Agent - member of the acylfulvene prodrug class
- Favorable *in vitro* and *in vivo* efficacy across multiple tumor types
- Broad anti-tumor agent that counteracts multi-drug resistance
- Nanomolar potency
- A.I. generated, validated and published gene signature for solid tumors
Overview of Lantern’s Small Molecule Portfolio

LP-100, Irofulven

- DNA Damaging Agent
- Derived from highly toxic substance found in Jack o’Lantern mushroom – Illudin S
- Company name “Lantern” is also derived from this origin of the compound
- LP-100 is a highly potent semi-synthetic derivative of the active toxic compound found in this fungi
LP-100 (Irofulven): out-licensed to Allarity Therapeutics and in an active, genetically-guided clinical trial for prostate cancer

<table>
<thead>
<tr>
<th>History of Safety, Tolerability &amp; Efficacy in Multiple Clinical Trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prior history in over 41 clinical trials spanning 13 different solid tumors</td>
</tr>
<tr>
<td>• Over 1,500 patients were dosed with LP-100 with a good history of tolerability in patients</td>
</tr>
<tr>
<td>• Historical trials showed efficacy in subsets of patients and were not designed to select patients based on the potential to respond to the therapy</td>
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<tr>
<td>• Lack of biomarker-based strategies or stratification in previous trials resulted in modest advancement</td>
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<table>
<thead>
<tr>
<th>Current status</th>
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<tbody>
<tr>
<td>• Out-licensed to Allarity Therapeutics in 2016</td>
</tr>
<tr>
<td>• Lantern Pharma can receive up to $14M or a specified percentage of future earnings from the sale or out-licensing of LP-100 – trial expected to end by first half of 2021</td>
</tr>
<tr>
<td>• First patient dosed in mHRPC (metastatic, hormone-resistant prostate cancer) in Q4 2018 in a Phase II trial using biomarker screening technology on the tumor to select patients</td>
</tr>
<tr>
<td>• US patent directed to use of drug in combination with tumor biomarker signature (filed by Allarity Therapeutics) through 2036</td>
</tr>
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</table>
LP-100 (Irofulven): Historical* phase II trial results in prostate cancer

Median 1 yr. survival was 86% greater in Irofulven in combination treated metastatic prostate cancer patients v. control

Current Ongoing Precision Phase II Trial

- Screening patients using Irofulven-specific biomarker signature and recruiting eligible patients with Hormone Refractory Prostate Cancer (HRPC)
- Allarity Therapeutics dosed first patient in HRPC in Q4 2018 in a Phase 2 trial using biomarker technology to ID and monitor patients
- Trial expanded to both Denmark & Germany and estimating up to 27 patients to be enrolled

LP-300 in development for female never-smokers with NSCLC adenocarcinoma based on strong historical data

**Mechanism of action**
- Disulfide bond disrupting agent
- Disrupts by covalently modifying cysteine
- Inhibits and modulates activity of proteins in NSCLC pathways (ALK, EGFR, MET, ROS1)

**Prior Clinical Experience**
- Prior history in 5 phase 1 and 5 phase 2 and 3 clinical trials in lung and breast cancers as a combination agent
- LP-300 has been administered to over 1,000 patients and has been generally well tolerated
- Prior studies did not stratify or select patients based on biomarker or smoking status

**Current status**
- Targeting never-smoker sub-population, as a potential target rare disease market (April 2020)
- Designing phase II clinical trial for use in non-smokers with NSCLC adenocarcinoma
- Exploring preclinical in vivo studies to characterize efficacy as a combination with approved targeted therapies
- Leveraging RADR® to develop biomarker signature that can be used to predict patients most likely to respond to combination therapy with LP-300
Lung Cancer in Never-Smokers (LCINS) – a hidden but rising disease

- **7th leading cause of death** among patients with solid tumors
- **More frequent in women** with ~2/3 of patients with no reported smoking history
- **Adenocarcinoma is the most common histology** accounting for ~60% of non-smoking NSCLC patients
- **20% to 25% of global lung cancer cases and deaths** occur among never-smokers
- **LP-300 patent application** for use in never-smoking NSCLC patients (potential protection until 2039)
- **Significant mutational difference** in LCINS v. Smokers – esp. in EGFR, TP53, STK11 and KRAS**

**Mutation frequency data compiled by Lantern Pharma from 6 studies**

*Proli C et al., ASCO 2015; Pelosof L et al., ASCO 2015*
Lantern's precision oncology approach in the LP-300 Phase II trial will build on a prior Phase III trial that did not meet clinical efficacy endpoints but demonstrated survival benefit in a patient subgroup.

<table>
<thead>
<tr>
<th></th>
<th>LP-300 + Cisplatin/ Paclitaxel</th>
<th>Placebo + Cisplatin/ Paclitaxel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 Year Survival %</strong></td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Females (N=114)</strong></td>
<td>51%</td>
<td>31%</td>
</tr>
<tr>
<td><strong>never-Smokers (N=87)</strong></td>
<td>65% increase in 2 Year Survival Compared to Placebo</td>
<td>28%</td>
</tr>
<tr>
<td><strong>Female never-Smokers (N=66)</strong></td>
<td>125% increase in 2 Year Survival Compared to Placebo</td>
<td>32%</td>
</tr>
</tbody>
</table>

Source: Phase 3 clinical trial, study ID DMS32212R, conducted by BioNumerik Pharmaceuticals - subpopulations receiving paclitaxel/cisplatin.
Female never-smokers showed the clearest statistically significant positive outcome among subgroups in the LP-300 treatment arm in advanced adenocarcinoma patients in Phase III.
Proposed design for relaunching of Phase II clinical trial for LP-300 in a targeted patient population

Histology / demographic/ smoking history screening

Never-smoker NSCLC Adenocarcinoma patients

50 – 75 stratified patients

LP-300 + standard of care
(Dosing every 3 weeks and up to 8 treatment cycles)

Trial Design
- Non-Randomized
- Masking: None (Open Label)
- Primary Purpose: Treatment
- Study arms: Single experimental arm

Efficacy Endpoints
- Primary: Overall Survival
- Secondary: Objective Response Rate/ Clinical Benefit Rate/ Progression-Free Survival/ Quality of Life
LP-184 for solid tumors and certain PTGR1 expressing cancers

Unique Features

- Hydroxyurea Methylacylfulvene
- Nanomolar potency across multiple solid tumor (pancreas, prostate, liver) and glioblastoma cell lines
- Broad anti-tumor agent that counteracts multi-drug resistance and is independent of other mutations (p53, KEAP1)
- Favorable in vitro and in vivo efficacy allowing improved therapeutic index and pharmacokinetics
- Promising blood-brain-barrier (BBB) profile

Current status

- 4 new patent filings: 2 new applications on synthetic manufacturing of new molecular entities & 1 new application on gene signature to stratify patients responsive to LP-184 & 1 for GBM
- Wet lab validated 16 gene signature leveraging NCI Cell Miner platform from our collaboration
- Q2 2020 launch of collaborative study with Georgetown University in Prostate and Pancreatic Cancers
- Q1 2019 initiation of the PRAISE (PRostate cancer Artificial Intelligence Study using Ex vivo models) collaboration with C-TRIC, partially funded by Invest Northern Ireland
LP-184 treatment resulted in greater tumor regression in a mouse model with human cancer.

**Treatment of Mice Engrafted with Human MV522 Multi-drug Resistant Tumor Cells**

- **No Drug**
- **LP-100, 10 mg/kg**
- **LP-184, 10 mg/kg**
- **LP-184, 20 mg/kg**

Drugs administered i.p. 3x a week for 3 weeks.

Source: Staake et al., Bioorganic & Medicinal Chemistry Letters (2016)
Proposed LP-184 mechanism of action based on acylfulvene drugs

1. Potential synergistic drug combinations due to involvement w/ DNA repair pathway and supported by gene correlation studies

2. Approved drugs in certain drug classes have been identified to be synergistic with LP-184 when used in combination for cancer treatment
LP-184 shows a 10x – 3,800x increase in \textit{in vitro} potency over approved chemotherapeutics in various solid tumors.

LP-184 IC50 data from Lantern generated data, Cisplatin and Pemetrexed IC50s from GDSC database.
LP-184 shows significant promise in improving patient outcomes in Glioblastoma (GBM) – a rare cancer with median survival of < 1 year.

500x – 13,000x increase in *in-vitro* potency over TMZ, (the current standard in GBM)

![LP-184](image)

**Comparative sensitivity of LP-184 across GBM cell lines**

<table>
<thead>
<tr>
<th>Molecule</th>
<th>BBB permeability probability score</th>
<th>Developmental stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LP-184</td>
<td>0.9694</td>
<td>Preclinical</td>
</tr>
<tr>
<td>TMZ</td>
<td>0.9879</td>
<td>Approved</td>
</tr>
<tr>
<td>Carmustine</td>
<td>0.9533</td>
<td>Approved</td>
</tr>
<tr>
<td>Cilengitide</td>
<td>0.9362</td>
<td>Phase II</td>
</tr>
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Using admetSAR2, a tool for evaluating chemical ADMET (absorption, distribution, metabolism, excretion - toxicity) properties

The current standard of care for GBM consists of de-bulking surgery followed by combined treatments with fractionated ionizing radiation (IR) and the DNA alkylating agent **temozolomide (TMZ)** which less than 50% of patients respond to*

Source: Genes & Disease, Volume 3, Issue 3, Sep. 2016 0 pp. 198-210

Nasdaq: LTRN
RADR® - A robust and scalable platform for accelerating the development of targeted cancer therapy, precision trials and Companion Dx

**Real World Applications**
- Robust precision medicine/drug development
- Uncovering potential drug combinations
- Predicting synergy with Immuno-oncology agents
- Drug repositioning, revitalization & rescue
- Companion Dx development

**Model Data Sets**
- 500+ million transcriptomic and drug sensitivity data points
- >144 drug-tumor interactions
- 13,200+ real world patient records

**Data Sources**
- Public Sources such as Gene Expression Omnibus (GEO), Cancer Cell Line Encyclopedia (CCLE), Genomics of Drug Sensitivity in Cancer (GDSC), Industry Data & Proprietary Data

**AI Methods Being Deployed**
- Analytics: Integrated systems biology, statistical and descriptive analysis
- Machine Learning: Supervised ML (Neural Network & Support Vector), variations in established ML algorithms

**Output**
- Secure Cloud Based Storage & Computing
- Machine Learning Frameworks
- Internally Generated Data
- Open Source & Published Data
- Collaboration & Partner Data

**RADR® Precision Medicine Platform**
RADR® identifies genetic markers and signatures for precision oncology drug development, clinical response prediction and CDx enablement.

80% Success in Blinded Predictions

13,200+ Oncology Patient Records & Response Information

144+ Drug-Tumor Interactions

~500,000,000 Data Points Collected, Normalized, & Integrated from Real World, Translational & Clinical Cancer Evidence &

Output & Signature Development Process

18,000 Gene features from transcriptomic data

2,000 Genes in first filter of feature selection

200 Genes from output of feature selection

10-50 Candidate biomarkers

Platform Architecture
RADR® Workflow Details

- Uses machine learning methods to train on datasets
- Parameter tuning and model development and evaluation

Training Set

Optimal model used on testing dataset

Genetic Data
- Drug Sensitivity Data
- Gene Sets

Testing Set

Cancer Patient Population

- Responders
- Partial Responders
- Non Responders

Optimized Predictive Response Model

Biomarker Panel or Gene Signature for a CDx

Guidance for clinical trial design & studies

Nasdaq: LTRN
Our Intellectual Property Portfolio – Extensive and continually growing position of over 108 issued and in-licensed patents and 7 patent applications across 14 patent families.
Studies & Collaborations With Top Tier Academic & Research Partners

- Memorial Sloan Kettering Cancer Center
- NIH National Cancer Institute
- C-TRIC Clinical Translational Research and Innovation Centre
- Fox Chase Cancer Center
- Temple Health
- Georgetown University
# Heavy investment & investor interest in A.I. driven drug development

<table>
<thead>
<tr>
<th>Company</th>
<th>Investment</th>
<th>Valuation*</th>
<th>Pipeline Status</th>
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</thead>
<tbody>
<tr>
<td><strong>Lantern Pharma</strong></td>
<td>Jun. 2020 IPO (NASDAQ: LTRN)</td>
<td>$120+ Million</td>
<td>• Oncology Focus in 4 programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$26 M. raised at IPO</td>
<td>• Ph. 2 – Prostate, Ph. 1 - NSCLC</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Pre-Clin. – Solid Tumors &amp; GBM</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Funded through milestones into 2022</td>
</tr>
<tr>
<td><strong>BioXcel</strong></td>
<td>Mar. 2018 IPO (NASDAQ: BTAI)</td>
<td>$1,100+ Million</td>
<td>• Ph. 3 – Neuro</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$65 M. raised at IPO</td>
<td>• Ph. 2 – Immuno Oncology</td>
</tr>
<tr>
<td><strong>Schrödinger</strong></td>
<td>Feb. 2020 IPO (NASDAQ: SDGR)</td>
<td>$3,600+ Million</td>
<td>• 5 compounds in early discovery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$232 M. raised at IPO</td>
<td>• All oncology, targeted small molecule</td>
</tr>
<tr>
<td><strong>Recursion</strong></td>
<td>$226+ M. total</td>
<td>$600 – 800 Million</td>
<td>• 4 Phase 1 compounds</td>
</tr>
<tr>
<td></td>
<td>Latest 07/2019 private raise</td>
<td>(estimate based on last round)</td>
<td>• 1 oncology</td>
</tr>
<tr>
<td><strong>Atomwise</strong></td>
<td>$50+ M. total</td>
<td>$200 – $300+ Million</td>
<td>• Partners w/ academic and pharma</td>
</tr>
<tr>
<td></td>
<td>Latest 03/2018 private raise</td>
<td>(estimate based on last round)</td>
<td>• No captive pipeline</td>
</tr>
<tr>
<td><strong>BenevolentAI</strong></td>
<td>$290+ M. total</td>
<td>~$1,100 Million</td>
<td>• Partners w/ academic and pharma</td>
</tr>
<tr>
<td></td>
<td>Latest 09/2019 private raise</td>
<td>(pre-money based on last round)</td>
<td>• Tech and service provider</td>
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*Source: Crunchbase, Pitchbook and Bloomberg

* Valuations of public companies as of October 7, 2020

**Nasdaq: LTRN**
Value Building Milestones & Inflection Points

Foundational Year
Advance Platform
Prepare Trial Launches
Prioritize Additional Compounds

Second Half of 2020
✓ Advances for launch of IND-Enabling studies for LP-184
✓ Results from preclinical work in Glioblastoma LP-184
✓ FDA related activity to explore launch of Phase 2 for LP300 as a rare cancer trial for never-smokers
✓ Further validation of RADR™ platform and signatures
✓ Data from collaboration with Georgetown in Prostate and Pancreatic Cancers
✓ Validate signature for LP-184 to design pan-tumor clinical studies and trial
✓ Focus on increasing RADR® A.I. Platform to over 750 million data points

Multiple Streams of Value Creation
Launch Multiple Precision Trials
Leverage Platform for Pharma Partners
Secure Additional Compounds
Readout for LP-100 Ph. 2

2021-22
✓ Readout from targeted Ph. 2 trial in EU in prostate cancer first half of 2021 with LP-100
✓ Launch Ph.2 clinical trial for LP-300 in NSCLC (never-smokers)
✓ 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. IO agents)
✓ Strategically grow RADR A.I. Platform data points beyond 1 Billion
✓ Big pharma partnership and collaboration on drug rescue, repurposing or development
## Cap Table

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<thead>
<tr>
<th>LANTERN PHARMA INC. (LTRN)</th>
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<tbody>
<tr>
<td>Common Shares Outstanding</td>
<td>6,217,577</td>
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<tr>
<td>Warrants (WAEP $3.13)</td>
<td>262,014</td>
</tr>
<tr>
<td>Underwriter Warrants (Exercise Price at $18.75)</td>
<td>70,000</td>
</tr>
<tr>
<td>Options (Employees, Management and Directors)</td>
<td>820,608</td>
</tr>
<tr>
<td><strong>Fully Diluted Shares Outstanding</strong></td>
<td>7,370,199</td>
</tr>
</tbody>
</table>

- Management and Directors own ~51% of fully diluted shares outstanding.
- Committed to creating enduring growth and value for LTRN shareholders.
Highly experienced in innovation for pharma, drug development & oncology

Management Team

Panna Sharma  President & CEO
• Former President & CEO at Cancer Genetics (Nasdaq: CGIX)
• Led IPO, Private investment round and multiple global acquisitions
• Led CGIX to five years on Deloitte Fast 500
• Founder & CEO TSG Partners (Life Sciences Investment Bank & Strategy Consulting)
• Chief Strategy Officer, iXl (Nasdaq: IXL)
• Analyst & Consultant, BankofAmerica, Putnam Investments, Interactive Solutions

Kishor Bhatia, Ph.D., FRC Path  Chief Scientific Officer
Former:
• Director AIDS Malignancy Program. Office of HIV and AIDS Malignancy, National Cancer Institute
• Director, Cancer Children's Cancer Research Center, KFSHR&C, Riyadh
• Director, International Network for Cancer Treatment and Research, Brussels
• 1st to clone PARP gene involved in DNA damage
• Over 250 publications with global collaborators & researchers

David Margrave, J.D. Chief Financial Officer
• 20+ years of oncology focused management experience.
• Former President and as Chief Administrative Officer, BioNumerik Pharmaceuticals
• Expertise in biotech deal structuring, and corporate management
• Chairman of the Texas Healthcare and Bioscience Institute
• Chairman of the State of Texas Product Development & Small Business Incubator Board
• Univ. of Texas and Stanford graduate

Board of Directors

Jeff Donald Keyser, Ph.D., J.D., MPA
• Board Chairman
• Founder of Renibus Therapeutics and ZSPharma

Franklyn Prendergast, M.D., Ph.D. Emeritus
• Board of Governors and Board of Trustees, Mayo Clinic
• Professor and Director –Mayo Clinic Comprehensive Cancer Center
• Emeritus Member of Eli-Lily Board of Directors
• Board of Directors, Lantern Pharma, Cancer Genetics, and TGEN
• Distinguished Alumnus Mayo Clinic

Vijay Chandru, Ph.D.
• Co-Founder, Chairman Scientific Advisory Board, Strand Life Sciences
• Fellow Indian Academies of Sciences and Engineering
• Technology Pioneer, World Economic Forum
• Co-Founder, Yantri Labs and other AI Companies
• Research Professor: IISc, Purdue, MIT, UPenn, Stanford

David Silberstein, Ph.D., MPH
Former
• Director, Astra Zeneca
• Sr. Director, MedImmune
• Asst. Professor of Medicine, Harvard Medical School
• Currently Principal Investigator of an NCI funded clinical trial in patients with multiple brain metastases

Leslie (Les) W. Kreis
• Managing Partner & Co-Founder, BIOS Partners
• Principal & Founder, Steelhead Capital Management
• Co-Founder, Cowtown Angels
• Vice President, HRK Investments

Panna Sharma
• President & CEO, Lantern Pharma

Nasdaq: LTRN
Investment Highlights - Lantern Pharma has a unique, growing and validated foundation for the future of cancer therapy and patient care

- Active drug rescue process and in the clinic with 2 compounds and accelerating additional compounds and combinations to clinical trials...potentially saving tens of millions and years of development

- Growing A.I. based platform with clear roadmap to 1+ Bn. datapoints focused exquisitely on cancer therapeutic development and companion Dx in a high growth, high demand $4 Bn market

- Focused on cancer drug market segments with clear clinical need, understood mechanisms, targeted patient populations that exceed 1 Million , and multi-billion USD in annual sales potential

- Potential to receive up to an additional ~$14 Million from LP-100 out-licensing deal during 2021-22

- LP-300 submitted for Orphan Disease Designation and LP-184 to be submitted for ODD in pancreatic and GBM which can help accelerate development

- Proven and growing library of A.I. & machine-learning methodologies published at ASCO, AACR and used to generate novel IP (108 issued, & 7 pending) and accelerate discovery by potentially years

- Experienced and innovative management team w/ 60+ years experience in cancer and a passion to change the cost and outcome for cancer patients by using A.I. and genomics – paradigm changing technologies

- Industry leading collaborations with National Cancer Institute, Georgetown, & Fox Chase Cancer Center